

Book of Collections XI

Property of Michael Nee

Herbarium, Birge Hall

Botany Department

University of Wisconsin

Class of Madison, Wisconsin 53706

EE. UU.

Dec. 10, 1973 April 11, 1974
#8681 - #11152



56-907

Made in U. S. A.

Index Herbariorum

dets.

det. R.L. = Det. Ron Liesner, MO

det. J.C. = apparently Conrad.

J.H. Jack Humbles, Scrophs.

D.L. D. B. Lellinger 345, ferns.

Dec. 10, 1973

5

Prov. Colón, Panamá

17 PPA 455-480/505-511

8681-8726

Along Río Guanche. 6 km. S of Portobelo.
alt. 0-10 m. Tropical wet forest.

1-3½ km. E of Portobelo-Puerto Pilón road bridge.

MO, 27.

8681 Ocotea puberula Nees

Tree 10 m. tall, 30 cm. dbh. along river.

Flowers pale green. det. Werff, 1983

MO, 6.

8682 Paspalum

Dense patch on open gravel bar.

MO, 14.

8683 Laurac. Ocotea puberula Nees

Tree 15 m. tall, 45 cm. dbh, slightly buttressed
at base. Flowers yellowish. det. Werff, 1983

MO, MAD, 6.

8684 Protium panamense (Rose) I. M. Johnston

MADW 32512. Shrub 4 m. tall, slender.

The few flowers yellowish green, fruit
reddish. det. T. Croat, 1974.

MO, , , .

8685 Physalis pubescens L. det. D'Arcy 1974

On boulder in open pasture. Corolla yellow
with dark brown spots.

MO, .

8686 Plukenetia stipellata L. J. Gillespie det. Webster
Vine in second growth. Fruit green. ^{thick}

MO, .

8687 Psychotria macrophylla Ruiz + Pav.

1 m. tall. Corolla pale green. det. J. Dwyer,

MO, .

8688 Rub. Psychotria calophylla Standl. 1990

Small tree. Fruit turning orange. det. J. Dwyer, 1975

MO, .

8689 Calathea

Herb 1 m. tall. Flowers white.

MO.

8690 Orchid Pleurothallis grobyi Lindl. det. R. Koenig

Epiphyte on fallen branch. Flowers pale greenish.

Dec. 10, 1973

Prov. Colón, Panamá

17 PPA 445-480/505-511

- MO. 8691 orchid
Epiphyte on fallen branch.
- US, 8692 lichen-graphid.
fallen branch.
- MO, F. 8693 Sapind.
Woody vine into canopy. Flowers on
leafless lower part of stem, fragrant,
petals ~~yellow~~ ^{white}, staminodes yellow.
- MO, , . 8694 Olmedia aspera R. + P.
Shrub 4 m. tall.
- MO, , . 8695 Rinorea squamata Blake det. Hekking, 1992
Shrub 4 m. tall. Fruit green.
- MO, , , . 8696 Swartzia panamensis Benth. det. R.S. Cowan 1980
Tree 40 cm. dbh, trunk fluted.
- MO. 8697 bromel. Catopsis sessiliflora (Ruiz + Pav.) Mez
epiphyte. det. M. Huff, 1989
- MO. 8698 orchid. Platythelys venustula (Ames) Garay ^{det. E. Christenhusz 1990}
Terrestrial. Flowers greenish white.
- MO, , . 8699 Peperomia urocarpoides C. DC. det. R.L. 1976
Fallen branch.
- MO, , . 8700 Piper nudifolium C. DC. det. J. Conrad, 1975
1/3 m. tall.
- MO, 5. 8701 Ficus vs. macbridei Standl. det. CC. Berg 1976
Tree 10 m. tall with copious milky sap.
Figs dark green with light raised
spots.
- MO, , , . 8702 Compsoeura
Small tree 6 m. tall.

Dec. 10, 1973

7

Prov. Colón, Panamá

17 PPA 445-480/505-511

prob. given

#s 8715 + 8712 respectively
instead.

8703 *Guatteria amplifolia* Triana + Planch
Tree 7 m. tall, 10 cm. dbh.

8704 *Randia*

Shrub 2 m. tall along rocky streambed.

US.

8705 ~~*Hymenocallis*~~ *Coenogonium*

MO, 9.

8706 *Swartzia simplex*

Shrub 4 m. tall. Fruit bright orange,
seed shiny black, aril white.

MO, , , .

8707 (*Diolena*) *Monolena multiflora* Warner, ined.
On rocks of "gorge". det. R. Warner, 1980

MO, 4.

8708 *Lunania parviflora* Benth. det. R. L. Hiern, 197-
Tree 6 m. tall. Inflorescence pendant.

MO, , .

8709 *Comp. Fleischmannia sideritides* (Benth.) King + Robins.

In crevices of rocks along stream. det. R. L. 1977

MO, , , , .

8710 *Ficus hartwegii* (Miq.) Miq. *F. colubrinae* Standl.
det. C. C. Berg 1976

Epiphytic shrub (?). Figs ± white.

MO, , .

8711 *Eryngium foetidum* L.

Common weed in *Capsicum*, *Manihot*
and banana field.

MO, , , , .

8712 *Randia*

Shrub 2 m. tall. Open gravelly bed of river

MO, , , .

8713 *Elephantopus dilatatus* Gleason det. R. L. 1976
Rocks along river. Flowers blue.

MO, 4.

8714 fern. Prob. *Asplenium cuspidatum* var. *triculum*

Rocks along ~~at~~ river. very atypical. det. ^{bell.} Kellinger, 1977.

MO, , , , .

8715 *Guatteria amplifolia* Triana + Planch.

Small tree 5 m. tall. Fruit green, stipes red.
Flowers greenish. det. R. Hiern, 197-

Dec. 10, 1973

Prov. Colón, Panamá

17 PPA 445-480/505-511

US, 7.

8716 lichen

Damp rocks of river ~~gorge~~ gorge. Light green.

F, .

8717 hepat.

damp rocks of river gorge.

MO, 5.

8718

Laurac. Nectandra ^{N. pilosa det. J. Schuber, 1970} ~~membranacea~~ (Sw.)

Tree. Fruit green. det. H. v. d. Werff, 1966 Grieb.

MO.

8719

Zovomitopsis glauca Oerst. det. R. Liesner, 1975

Shrub. Fruit red and yellowish.

MO, .

8720

Gesner. Napeanthus apodemus J. D. Sm.

Rocky area. Leaves purplish beneath.

Corolla blue. det. L. E. Skog, 1970

MO,

8721

moss. Acroporium pungens (Hedw.) Broth.

Twigs of shrubs along river.

MO.

8722

Neea darinenensis Dwyer + Hayden

1/2 m. tall. Fruit green, branches of inflorescence red. det. R. Liesner, 1975

MO, , .

8723

Myrsin.

Shrub. Fruit turning dark red.

MO.

8724

Bromel.

MO, , , , .

8725

Rub. Psychotria psychotriifolia (Seem.) Standl.

Shrub 1.5 m. tall. Corolla white. det. J. Dwyer, 1975

missing?

8726

Laur.

Dec. 10, 1973

9

Prov. Colón, Panamá

17PPA 480/561

8727-8729 Open weedy area $\frac{1}{2}$ km. E of Portobelo.
alt. 10 m.

MO, 13.

8727 Coix lachryma-jobi L.

To 2 m. tall. "Beads" green when fresh.

MO, 14.

8728 Solanum hayesii Fern. ! D'Arcy 1974

Small tree 4 m. tall with spines on
main trunk. Flowers with heavy
sweet odor, corolla white, fruit green.

MO, , , .

8729 Hyparrhenia

Dec. 11, 1973

Canal Zone, Panama

17 PPA 435/089

MO, , , .

8730

Ceratophyllum demersum L. det. R.L. 1977

Floating in quiet water of edge of
Chagres River, 1/2 Km. N of Gamboa. alt. 26 m.
With Hydrilla, Azolla, Pistia stratiotes,

17 PPA 433/090

~~8731~~

9135

Malv.

Brushy roadside. 1.5 m. tall herb with stiff
hairs easily penetrating skin. Flowers yellow.
1 Km. N of Gamboa. alt. 30 m.

Dec. 12, 1973

8 11

Prov. Panamá, Panamá

8810
8731-~~8822~~
8822-8823

Premontane wet forest along new El Llano-
Carti road, 8-12 Km. N of El Llano.
alt. ca. 400-450 m.

MO, . 8731 Apoc.

Vine on shrub. Corolla yellow, tube red
on outside.

MO, , , , , . 8732 Solanum hazenii asperum L.C. Rich. det. D'Arcy
1974

Bushy shrub 3 m. tall. Flowers
hanging, corolla white. Fruit green, erect.

MO, , , . 8733 Dioscorea racemosa (Klotzsch) Uline det. O. Telle
1986

Vine on small tree. Fruits purplish.

MO, . 8734 Weigeltia

Slender shrub 3 m. tall. Fruit turning
orange with darker dots.

MO, . 8735 Anthurium wendlingeri Barroso det. T. Croat 1979

Spathes rolled up, purple. Spadix spiral,
light green.

MO. 8736 Columnea crassa Morton det. G.E. Skog 1977

Flowers light yellow.

MO, , , . 8737 Ossea Clidemia epiphytica (Triana) Cogn.

Viny. det. R. Kiesner, 1975

MO, . 8738 Myrt.?

Woody vine to 4 m. fruit green.

8739 Salacia

Small tree 6 m. tall. Fruit green + white
striped.

Did AC Gentry
take this under
his numbers?!

Dec. 12, 1973

Prov. Panamá, Panamá

- MO, MAD, , , 8740 *Ryania speciosa* Vahl var. panamensis monach. det. R. Liesner, 197-
MADW 32513 @ Shrub 6 m. tall. Flowers reddish.
- MO, , , 8741 Legum.-Caes. Macrolobium sp. nov.
Tree 10 m. tall. Flowers green, mostly in bud. det. R.S. Cowan, 1980
- MO, , , 8742 Hymenophyll. ? Peltapteris peltata (Sw.) Morton
Epiphyte on tree branches. det. D.B. Kellinger 1977 f. peltata
- MO. 8743 Bromel. Guzmania musaica (Lindem. Andre) Mez.
det. Utley, 1985 Epiphyte, reproducing by stolons. Leaves light green, dark green and purple mottled. Inflorescence red, orange and yellow.
- MO, . 8744 Gram.
- MO, , , , 8745 Eric ? Cavendishia capitulata Donn. Sm. det. J. Luteyn 1975
Epiphytic (?) shrub. Bracts pink, calyx white. Corolla white at base, pink at top.
- MO, 7. 8746 Dioscorea racemosa (Kl.) Uline det. T. Croat. 1974
Vine on tree. Flowers purplish.
- MO. 8747 Calathea
Bracts green, flowers white.
- MO, , , , 8748 Eschweilera sessilis A.C. Sm.
Tree 8 m. tall, 10 cm. dbh. Petals old rose, hood yellow. det. S. Mori, 1986
- MO. 8749 Mabea
Shrub 3 m. tall. Fruit green and reddish.
- MO, . 8750 Cactus Epiphyllum crenatum (Lindl.) G. Don
Vine to 4 m., appressed to trunk of Socratea durissima. det. H. Bravo + R. Scheinvar, 1985

Dec. 12, 1973

13

Prov. Panamá, Panamá

- MO, 6. 8751 Eric. Satyria warszewiczii Klotzsch
Vine in tree. Fruit green, pedicel red
at base. det. Wilbur & Luteyn, 1978
- MO, 6. 8752 Mabea jefensis Huft det. Webster & Huft
Shrub 3 m. tall, fruit reddish.
- MO, MAD, 9. 8753 Heisteria acuminata (Humb. & Bonpl.) Engl.
MADw 32514. Slender tree 6 m. tall.
Flowers pale yellowish green. Calyx green,
fruit green, becoming red tinged. det. H. Steiner
- MO. 8754 Heliconia cf. aurantiaca Ghiesbr. det. A. H. Gentry
Bracts and young fruit bright
orange. Flowers greenish yellow.
- MO, , . 8755 Melastom.
Shrub 1 m. tall. Corolla white.
- MO, , . 8756 Spathiphyllum fulvovirens Schott
Terrestrial. Spathe and spadix both
either green or white. det. T. Croat, 1975
- MO. 8757 Anthurium
Epiphyte. Spathe and peduncle purple.
Spadix green and brown.
- MO. 8758 Anthurium pendens Croat.
Epiphyte. det. Croat, 1981
- MO, , . 8759 Cactus. Epiphyllum grandilobum (Weber) Britt. & Rose
Epiphytic vine. Margin conspicuously
undulate. det. J. C. Solomon 1978
- MO, 4. 8760 Peperomia insueta Trel. det. R. L. 1976
on boulder along stream.

Dec. 12, 1973

Prov. Panamá, Panamá

- mo, , . 8761 ^{det. R. Warner, 1980} Melastom. Monolena dressleri Warner, ined.
Boulder along stream. Leaves purple beneath.
- mo, , . 8762 Peperomia maculosa (L.) Hook. det. R.L. 1976
Vine on boulder and rotten log along stream.
- mo, , . 8763 Rub. Cephaelis dressleri Dwyer det. J. Dwyer, 1975
 $\frac{1}{2}$ m. tall. Humus accumulates among the leaf bases and adventitious roots sent into it. Inhabited by ants. Fruit dark green.
- mo, , , . 8764 Acanth.
Vine in shrub. Corolla dull orange.
- mo, , , . 8765 Capparis
shrub 1.5 m. tall. Humus accumulates among the leaf bases and adventitious roots sent into it. Flower buds dirty white. Open flowers seldom seen according to Dr. Dressler.
- mo, , , . 8766 ~~Melastom.~~ Rub. Gonzalagunia bracteosa (Donn.Sm.) Rob.
Shrub 3 m. tall. Inflorescence hanging, corolla white. det. J. Dwyer.
- mo, , , . 8767 Sapind.
Vine to 10 m. into tree, leafy only at top, flowering all the way to the ground. Flowers fragrant. Petals white, stamens yellow.
- mo. 8768 Fern. Polyborya aucuparia Christ. det. D.B. Gellinger 1977
Vine to 2 m. on slender tree. Fronds dimorphic, only one fertile one on this vine. P. polybotryoides (Baker) Christ det. R. Moran,

Dec. 12, 1973

Prov. Panamá, Panamá

- MO, MAD, . 8769 Faramaea eurycarpa Donn. Sm. det. J. Dwyer 1975.
MADw 32515. Slender shrub 4 m. tall.
Flowers blue-white, fruit green.
- MO, MAD, 9. 8770 Myrt. & Myrcia panamensis B. Holst & M. L. ^{Kawag}
MADw 32516. Slender shrub 5 m. tall.
Fruit pink and white. det. Holst, 2004
- MO, 5. 8771 Besner. Drymonia aciculata Wiehl det. L. E. Skog 1978
Vine on small tree. Corolla brownish within.
- MO, , . 8772 Aegiphila hoehnei var. spectabilis Mold.
Shrub. Fruit pale green. det. R. Liesner, 1975
- MO. 8773 orchid.
Epiphyte. Flowers white with blue.
- MO, 6. 8774 Myrt.
Shrub 6 m. tall. Fruit green. Cotyledons green, much convolute, punctate.
- MO, . 8775 Philodendron
Epiphyte, spicy fragrant when cut or crushed, stem exuding a clear sticky sap.
Petioles ca. 0.8 m. long. Spathe green. det. D'Arcy 1974
- MO, , , . 8776 (Solanum) Lycianthes esculentensis (Coul.) D'Arcy
1 m. tall. Flowers hanging, calyx white, corolla white with purple at tip of lobes. Fruit green, erect.
- MO. 8777 moss. Leucobrya.
- MO, 8. 8778 Dioscorea racemosa (Kl.) Uline det. T. Croat, 1974
Tangled vine. Flowers purplish green.

Dec. 12, 1973

Prov. Panamá, Panamá

- MO, , . 8779 Calathea
flowers white.
- MO, . 8780 Maripa
Fruit yellow and green.
- MO, 5. 8781 Machaerium
Vine.
- MO, 5. 8782 Clusia cupulata (Maguire) Maguire det. D'Arcy, 1980
Epiphytic shrub 3 m. tall. Buds pink and white, petals white, stigma yellow, sticky. Flowers sweetly fragrant.
- MO, . 8783 Mollinedia darienensis Standl.
Small tree. Fruit green. det. J. H. 1975
- MO, 7. 8784 Inga sertulifera DC. ssp. leptopus (Benth.) T. D. Penn.
det. Bennington Small tree 7 m. tall. Filaments white.
- MO. 8785 Cucurb. Selysia prunifera (Poepp. & Endl.) Cogn. det. Wunderlin 1975
Vine hanging out of tree. Fruit green.
- MO, . 8786 Melastom. Clidemia epiphytica (Tr.) Cogn. det. R. L. 1975
Viny. Calyx red-purple, fruit blue + purple.
- MO, 4. 8787 Inga urceolata Zamora, sp. nov. det. Z., 1989
Small tree 6 m. tall, 10 cm. dbh.
- MO, , . 8788 Inga urceolata Zamora, sp. nov. det. Z., 1989
Shrub 4 m. tall.
- MO, . 8789 Gnatteria amplifolia Triana + Blanch.
- MO, , , , . 8790 Guttif. Tovomita longifolia (Rich.) Hochs. det. Kiener, 1983
Tree 10 m. tall. Sap yellow. Fruit green with spots of a yellow substance.
- MO, 4. 8791 Virola
Slender tree 10 m. tall, 10 cm. dbh with

Dec. 12, 1973

17

Prov. Panamá, Panamá

annonaceous branching. Fruit brown.

mo, , , . 8792 ~~Brosimum~~ Brosimum rubescens Taub. det. C.C. Berg
Free 10 m. tall. Sap milky. 1976.

mo, , . 8793 Souroubea?

mo, , , . 8794 Sapind.

Bushy vine 4 m. tall. Petals white,
stamens yellow.

mo, , , , , . 8795 Gustavia dubia (Kunth) Berg.

Tree 10 m. tall, 20 cm. dbh. Fruits
green, the area at base of style clear dark
green. Inside of fruit now white,
contents of seed gelatinous.

mo, , , , . 8796 Rub. Duckea panamensis Dwyer det. J. Dwyer,
Shrub 2 m. tall. Fruit turning orange. 1975

mo. 8797 orchid.
Epiphyte. Flower white and purple.

mo, , , , . 8798 Witheringia
1 m. tall. Edge of forest.

mo, 8. 8799 Ryania speciosa Vahl var. panamensis Monach.
det. R.L. 197- Shrub 3 m. tall, branching annonaceous.
Style and filaments red, fruit reddish.

mo, , , , , . 8800 Witheringia
2 m. tall.

mo. 8801 Loranth.
On Ryania speciosa # 8799. Fruit
turning orange.

Dec. 12, 1973

Prov. Panamá, Panamá

- MO. 8802 Philodendron wendlandii Schott det. T. Croat, 1975
Epiphytic vine. Spathe purple at base within.
Spadix light green below, pink above.
- MO. 8803 Angaria Psiguria bignoniacea (P. & E.) Wunderlin det. Wund. 1975
Sterile vine among fallen trees.
- MO. 8804 Didorisantra hexandra (Aubl.) Standl. det. R. L. 1976
Flowers blue and white.
- MO. 8805 Melastom.
Shrub.
- MO. 8806 Sterculia glauca A. Gentry Ann. MO Bot Gard. 63:370.
Tree 15 m. tall. Calyx red.
- MO. 8807 moss. Leucobryac. Leucobryum martianum (Hornsch.) Hampe
- MO. 8808 " "
- MO. 8809 " "
- F, G. 8810 hepat.
mixed.
- MO. 8822 Coussapoua parviceps Standl. det. C. C. Berg 1976
sterile. Epiphytic shrub. Leaves purple beneath.
- MO. 8823 Markgraf?

Dec. 14, 1973

Canal Zone, Panama

17PPA 368/128

MO, MAD, , , ,

8811

Solanum accrescens Standl. & Morton ! D'Arcy 1974
 MADw32517. Subscandent shrub 4 m. tall.
 Corolla white, recurved, anthers yellow,
 fruit green. Edge of pre-montane wet forest
 along Pipeline Road, 8 km. NW of
 Gamboa. alt. 115 m.

Dr. C.C. Berg of Utrecht was collecting Moraceae
 and when I pointed out the *Pouzolzia* patch which I had collected as
 #6641, he wanted to get some.

17PPA 362-4/145-8

8812-8815

Premontane wet forest area along Pipeline
 Road, 9 km. NW of Gamboa. alt. 120-150 m.

MO, MAD, , , .

8812

Piper augustum Rudge det. J. Conrad,
 1974.
 MADw32518. Roadside shrub 2 m. tall.

Inflorescence hanging, green. only one seen
 (and lost), ca. 1.5 cm. thick, 8 cm. long.

MO, , , , .

8813

Guttifer. *Vismia billbergiana* Beurl.

Shrub 3 m. tall at edge of Pipeline clearing.
 Leaves green above, bronze beneath. Fruit
 yellowish green. det. N. Robson, 1978

MO, 13.

8814

Paullinia

Vine to 5 m. in shrub, sap milky. Great
 difference in leaf size (all from one vine).
 Fruit red, the best developed inflorescences
 forming globose clusters.

Dec. 14, 1973

Canal Zone, Panamá

17PPA 362-4/145-8

MO, 4.

8815

Asclep. Blepharodon mucronatum (Schlecht.) Dcne. det. D. Spellman 1974
Twining herbaceous vine on shrub in pipeline clearing. Sap milky, fruit green.

17PPA 358/152

MO, 7.

8816

Smilax lanceolata L.

Vine into trees at edge of brushy clearing of the pipeline crossing over the Río Macho, 10 Km. NW of Gamboa. alt. 100 m.
Flowers pale green. det. R. Liesner, 1975

17PPA 364/143

8817-8820

Premontane wet forest along Pipeline Road, 9 Km. NW of Gamboa. alt. 150 m.

MO.

8817

Ryania speciosa Vahl var. *panamensis* Monach.
Shrub 2.5 m. tall. det. H. Steumer, 198-

MO, 5.

8818

Henriettella fascicularis (Sw.) Triana det. R. L. 1974
Tree 8 m. tall, 15 cm. dbh.

MO,

8819

Rub. & *Psychotria bracteata* Sw. det. J. Dwyer, 1975
Shrub 3 m. tall. Corolla yellow, the "horns" on the outsides of the lobes near the tips are purple.

MO,

8820

Melastomo.

Small tree 8 m. tall. Fruit green, turning purple.

17PPA 370/135

MO,

8821

Xylopia frutescens Aubl. det. R. Liesner, 1975
Tree 8 m. tall at edge of premontane wet forest along Pipeline Road at Río Mendosa bridge, 8 km. NW of Gamboa. alt. 100 m. Fruit reddish.

Dec. 16, 1973

#8822-8823
see p. 18

21

Canal Zone, Panamá

ITPPA 492/020

MO,

9133

~~8822~~

moss. Isopterygium tenerum (Sw.) Mitt.
Rotting log. Secondary tropical moist
forest on E side of Summit Garden.
alt. 75 m.

ITPPA 423/089

8824

~~8823-8827~~

+ 9134

Top of Cerro Pelado, 1 Km. N of Gamboa.
Secondary tropical moist forest. alt. 200
- 220 m.

MO, 11.

9134 ~~8823~~

Davilla aspera (Aubl.) Benoist

Vine into tree at edge of radar clearing.
Sepals green, with red tinge.

MO, 10.

8824

Kohleria tubiflora (Cav.) Hausskn. ! L.E. Skog 1977

Herb to ~~2~~ 1.25 m. tall in grassy
radar clearing. Bracts of rhizome pink.
Flowers bright orange. A common
species around bamboo.

MO,

8825

Clitoria

Herbaceous vine in grassy radar clearing.
Petals white, keel with purple lines in
center.

MO,

8826

Rub. Psychotria capitata Ruiz & Pav. det. J.D. 1975
Shrub 2 m. tall. whole inflorescence white except
for green tips of bracts and yellow corolla throat.

MO,

8827

Gleichenia bifida (Willd.) Spreng. ! D.B. Hellinger 1977

Shady clay bank with Dicranopteris
Lycopodium cernuum which are likewise
poorly developed.

Dec. 17, 1973

Canal Zone, Panamá

17PPA 483/063

8828-8844

Along "abandoned" road C29 through secondary tropical moist forest. 6 km. ESE of Gamboa. alt. 200 m.

MO,

8828

Calathea lutea

Herb to 2 m. Leaves white beneath. Inflorescence erect. Bracts dull dark orange, flowers yellow, fruit pink with orange seeds on bright orange aril.

MO,

8829

Acanth. Justicia secunda Vahl det. L. Durkee, 1977.

Shrubs to 3 m. tall. Flowers red.

MO, 7.

8830

Verb. ? Aegiphila panamensis Mold. det. R. Liesner, ¹⁹⁷⁵

Scandent shrub to 4 m. tall. Fruit yellow-green.

MO,

8831

Begonia guadaluensis HBK.

2 m. tall herb. Flowers white, stamens yellow.

MO,

8832

moss.

on old cement foundation.

MO,

8833

mclastome.

Shrub 1.2 m. tall. Inflorescence, flowers and fruits various shades of purple.

MO, 9.

8834

Piper villiamulum C. DC. P. pseudofuliginum C. DC.

Shrub 3 m. tall. Spikes erect. det. R. Callejas

MO,

8835

Menisperm. Cissampelos pareira D. Rhodes, 1988

Vine in shrubs. Flowers and bracts green.

MO, 6.

8836

Trichospermum

Small tree 6 m. tall. Fruit reddish tinged.

MO, MAD,

8837

Solanum hayesii Fern. ! D'Arcy 1974

MADw 32519

Shrub 1.5 m. tall, stem with many spines. This is an unusually small flowering

Dec. 17, 1973

Canal Zone, Panamá

17PPA 483/063

MO, 9.

8838 Serjania

specimen of this species. Flowers with heavy sweet odor, corolla white, anthers yellow.

Vine in shrubs. Flowers white. Fruit green with faint tinge of red.

MO, , , , ,

8839

Comp. Verbesina gigantea Jacq. det. R.L. 1976

Unbranched, 3 m. tall. Flowers with unpleasant odor, white with black anthers. Common.

MO, , , , .

8840

Acalypha macrostachya Jacq.

Shrub 4 m. tall. Stigmas red.

MO, , , , .

8841

Cestrum latifolium Lam. det. D'Arcy 1974

Shrub 5 m. tall. Fruit green.

MO, , , , .

8842

Acanth. Elytraria imbricata det. L.H. Durkee 1977

MO, , .

8843

Comp. Melanthera aspera (Jacq.) Small det. R.L. 1976

To 2 m. tall. Flowers white.

MO, , , , ,

8844

Solanum hazenii Britt.Shrub 5 m. tall. Flowers hanging, corolla white, anthers yellow. Fruit erect, green. ? det. as S. hayesii Britt. by D'Arcy, 1974

17PPA 482/055

8845-8847 Along "abandoned" road C 29 through secondary tropical moist forest. 6 km. ESE of Gamboa. alt. 150 m.

MO, 11.

8845

Cleome pilosa Benth. det. H.H. Iltis, 1974

To 2 m. tall. Petals pale green, tinged with purple on outside.

Dec. 17, 1973

Canal Zone, Panama

17PPA 482/055

MO, , , ,

, , .

8846 *Pogonopus speciosus* (Jacq.) K. Schum.

Shrub 3 m. tall - Expanded calyx lobe bright red. Corolla pink. det. J. Dwyer, 1975

MO, , , ,

, .

8847 fern. *Pteris altissima* Poir.Petiole 1 m. long, blade 1.2 m. long, shaped much like that of *Pteridium aquilinum*.
det. D.B. Hellinger, 1977

Dec. 18, 1973

25

Prov. Panamá, Panamá

17 PPA 587-591/045-051

8848-8857

Weedy brushy cleared area near television tower on continental divide on ridge of Cerro Peñón, 3 km S of Alcalde Díaz. alt. ~~400~~ 440 m.

- MO, , , , . 8848 Scroph. Alectra aspera (Cham. & Schlecht.) L. Wms.
Flowers yellow. det. J. Humbles 1974
- MO, . 8849 Browallia americana L. det. D'Arcy 1974
Flowers blue with yellow and white spot at throat.
- MO, 6. 8850 Comp. Melanthera aspera (Jacq.) Small det. R.L. 1976
To 2 m. tall. Flowers white, anthers black.
- MO. 8851 Acalypha macrostachya Jacq. det. R. Liesner, 1975
Shrub 2.5 m. tall.
- MO, , , , . 8852 Commel. Phaeosphaerion leiocarpum (Benth.) Hassk.
Sprawling herb. Petals white. det. ~~R.L.~~ 1976
- MO, 5. 8853 Laciasis
Scrambling.
- MO, , , , . 8854 Solanum schlechtendalianum Walp. det. D'Arcy 1974
Shrub 2 m. tall. Corolla white, anthers yellow.
- MO, . 8855 Solanum asperum ~~Walp.~~ L.C. Rich. det. D'Arcy 1974
Shrub 2 m. tall.
- MO, 4. 8856 Guaizuma
Shrub 4 m. tall. Fruit green.
- MO, 9. 8857 Laciasis
Scrambling.

Dec. 18, 1973

Prov. Panamá, Panamá

17PPA 587-591/045-051

8858-8894

8897-8898

Vicinity of television tower on continental divide ~~3 km S~~ of Cerro Peñón, 3 km S of Alcalde Díaz. alt. 350-440 m.

- MO. 8858 Orchid
Exposed volcanic rock outcrop. Flowers odorless, purple.
- MO. 8859 *Polypodium polypodioides* (L.) Watt. var. *polypodioides*
Exposed volcanic rock outcrop. det. D.B. Gellinger 1977
- 8860-8863 Weedy roadside.
- MO, , , . 8860 Malv.
Shrub ~~1.5~~ 1.5 m. tall. Petals pale yellow, orange at base within.
- MO, , , . 8861 Convolv. *Jacquemontia tamnifolia* (L.) Griseb. det. R.L. 1977
Vine. Corolla and anthers white.
- MO, 5. 8862 *Cassia fruticosa* Mill. det. R. Lienesch, 1975
Shrub 3 m. tall. Petals pale yellow.
- MO, , , , . 8863 Comp. *Spilanthes alba* L'Her. ? det. R.L. 1976
Rays yellow.
- 8864-8885 Rocky, often much disturbed and second growth, tropical moist forest.
- MO, 24. 8864 *Combretum laxum* Jacq. det. R.L.
Large woody vine into tree. Fruits wine-red.
- MO, , , , . 8865 *Randia velutinica* Dwyer det. J. Dwyer, 1975
Shrub 5 m. tall. Fruit green or brownish. Seeds hard, light brown in darker brown,ummy smelling, pulp.

Dec. 18, 1973

27

- Prov. Panamá, Panamá
17 PPA 587-591/045-051
- MO, , , . 8866 Koanophyllon wetmorei (B.L. Robins.) King & Eupatorium det. R.L. 1976 B.L. Robins.
Shrub 1 m. tall. Disc greenish white.
- MO, 7. 8867 Manilkara chicle (Pitt.) Cilly. ?
Tree 15 m. tall, 45 cm. dbh, inner bark red, copious free flowing milky sap. Fruit brown, rough mealy.
- MO, , , , . 8868 Rondeletia panamensis Benth.
Shrub 7 m. tall, seems to be semi-scandent. Young fruit green. det. J. Dwyer 1975
- MO, 5. 8869 Aegiphila panamensis Mold. det. R. Liemer, 1975
Shrub 3 m. tall. Fruit yellow green.
- MO, 7. 8870 Urtic.
Tangled shrub 2 m. tall.
- MO, 9. 8871 Cestrum racemosum R. & P. det. D'Arcy 1974
Shrub 6 m. tall, 15 cm. dbh. Flowers yellowish green, the corolla lobes with conspicuous purple line on middle while in bud, this fading as the corolla fully expands.
- US, . 8872 Lichen
Shaded rock wall. Mostly on rock but spreading to roots appressed to the rock.
- MO, 22. 8873 Colubrina heteroneura (Griseb.) Standl.
Small tree 7 m. tall, 15 cm. dbh. Fruit green.
- MO, , . 8874 Solanum accrescens Standl. & Morton ! D'Arcy, 1974
Shrub 2 m. tall. Corolla white, lobes recurved, stamens yellow.

Dec. 18, 1973

Prov. Panamá, Panamá

17PPA 587-591 / 045-051

MO, , , . 8875

~~Asplenium~~ Blechnum occidentale L. f. occidentale
Clay bank. det. D.B. Liellinger 1977

F.

8876

Anthoceris

Clay bank.

MO, , , .

8877

Heliocarpus

Small tree 7 m. tall, 10 cm. dbh. Buds only.

MO, 20.

8878

Xylopia frutescens Aubl. det. R. Liesner, 1975Tree 8 m. tall, 10 cm. dbh. Fruit green,
tinged with red.

MO, 5.

8879

Pouzolzia

Viny shrub covering other shrubs to 4 m.

MO, .

8880

Scroph? Russelia sarmentosa Jacq. det. R.L. 1974Unbranched herb 2 m. tall. Corolla brilliant
red, odorless. 'J.H. 1975

MO.

8881

Legum.Small vine. Flowers light purple
and green.

MO, , .

8882

~~Stylogyne~~ cauliflora (Mart. & Klig) Mez. det. J. B. Polak, 1984.

Shrub 3 m. tall. Young inflorescences white.

MO.

8883

Triumfetta lappula L.

1 m. tall. Flowers yellow.

MO, 13.

8884

Ficus citrifolia Mill. det. J. Conrad, 1975Small tree 5 m. tall, 8 cm. dbh. with a few
adventitious "strangling" roots near base.Figs 7-9 mm. diam, light green with
very light spots. Stigmas white.

Dec. 18, 1973

Prov. Panamá, Panamá

17 PPA 587-591/045-051

MO, 4.

8885 Siparuna pauciflora (Beurl.) A.D.C. det. Humbles
Shrub 4 m. tall. "Flowers" green. Plant
with lemony odor.

MO, MAD, 15.

8886 Melastome Conostegia subcrustulata (Beurl.) Tr.
MADw 32520. Shrub 2 m. tall. Petals pink,
anthers yellow. det. R. Liesner, 1974.

MO, .

8887 Heliconia latispatha Benth. det. A. H. Gentry
Herb to 2 m. Inflorescence erect. Bracts
spiral, light orange at base, darker at tip.
Flowers light orange and green.

MO.

8888 Passiflora biflora Lam. det. A. Gentry, 1975
Vine to 2.5 m. in Saccharum spontaneum.
Stem green, angled. Flowers greenish white.

MO, , .

8889 Comp. Verbesina gigantea Jacq. det. R. L. 1976
Unbranched, 2.5 m. tall. Flowers greenish
white, anthers black.

MO, , , ,

8890 Clibadium surinamense L. det. R. L. 1976
Shrub 2 m. tall. Flowers white. Achenes
green and juicy.

MO, , , .

8891 Comp. Schistocarpha oppositifolia (Ktze) Rydb.
Herb 1 m. tall. Heads yellow. det. R. L. 1977

MO, , , , .

8892 Bignone Arrabidaea oxycarpa Urb. det. A. Gentry
1974
Vine in shrub. Fruit green, splitting
during drying.

MO, , , ,

8893 Pseudelephantopus spicatus (Juss.) Rohr.

Dec. 18, 1973

Prov. Panamá, Panamá

17PPA 587-591/045-051

MO, , , .

8894

Aeschynomene americana L. ! R.L.

1 m. tall. Flowers light orange with purple lines.

17PPA 593/060

8895-8896 Roadside, Las Cumbres area, 2 km S of
Alcalde Díaz alt. 200 m.

MO, MAD, 16.

8895

Desmodium cajanifolium (HBK.) DC.MADw 32521. Slender shrub 3 m. tall. Flowers
purple to blue-green. det. R. Liesner, 1974.

MO, 10.

8896

Xylopia aromatica (Lam.) Eichl.5 m. tall, sprouts from 20 cm. diam. shrubs.
Brushy roadside bank. Fruit green, becoming
reddish. det. R. Liesner, 1974

17PPA 587-591/045-051

8897-8898

See p. 26

MO.

8897

Comp. Spiracantha cornifolia HBK. det. R.L. 1976
Roadside at top. Flowers blue.

MO,

8898

Adiantum lucidum (Cav.) Sw. det. D.B. Weltinger
Terrestrial on rocky forest slope. 1977

Dec. 20, 1973

Prov. Panamá, Panamá

ca. 17PPA 525/146

MO, .

8899

Solanum mammosum L. ! D'Arcy 1974

Shrub 1 m. tall, cultivated as an ornamental in lawns along Madden Road, Buenos Aires. alt. 60 m. Fruit bright orange, eventually beginning to rot on plant. Corolla blue.

Canal Zone, Panamá

17PPA 516-521/172

8900-8907 Open weedy clay of construction area ~~at~~ 1 km. S of Madden Dam. alt. 80 m.

= Cyphomandra allophylla (Miers) Hemsl. det. D'Arcy 1974

MO, MAD, , , .

8900

Solanum allophyllum (Miers) Standl.

MADw 32522. Shrub 1 m. tall, trifurcating at $\frac{1}{2}$ m., then usually bifurcating at each inflorescence. Stems purple spotted, almost solid purple at nodes. Petioles and leaf veins purple. Fruit compressed and with shallow obscure groove on each side, light green and dark green striped, becoming purple spotted, falling white green and turning completely orange and stripes becoming obscure. ?? det. as S. caripense Dun. D'Arcy, 1974

MO, , .

8901

Solanum allophyllum (Miers) Standl.

$\frac{1}{2}$ m. tall. Flowers hanging, odorless, corolla white with faint greenish tinge, anthers white at tip, yellow below, with median greenish area. Fruit compressed and with

Dec. 20, 1973

Canal Zone, Panamá

17PPA ~~516~~ 516-521/172

shallow ~~obscure~~ obscure groove on each side,
light green and dark green striped, falling
white green and eventually turning orange.

MO, 6.

8902

Legume.

Vine on ground. Petals purple with darker
purple area surrounding the pale
yellowish spot at base of standard.

MO, 4.

8903

Cassia pilifera Vogel det. R. Liesner, 197-
0.75 m. tall. Flowers yellow.

MO, 13.

8904

Sapindus

Tree 6 m. tall in secondary tropical
moist forest at edge. Fruit green.

MO, 22.

8905

Calycophyllum candidissimum (Vahl) DC.

det. J.
Dwyer,
1975

Small tree 8 m. tall at edge of secondary
tropical moist forest. The whole tree
a mass of flowers, the bract very pale
green, appearing white, corolla and
filaments white. Flowers with strong
sweet fragrance, something like Syringa vulgaris.

MO.

8906

Physalis angulata L. det. D'Arcy 1974
Weed.

✓ MO, 8.

8907

Legume. Mucuna pruriens (L.) DC.

Vine on ground and weeds. Petals
dark purple.

17PPA 519/86

✓ MO, 14.

8908

= Senne n. (Benth.) I. & B. det. R. Barneby, 1980
Cassia nicaraguensis (Benth.) B. & R. det. R. Liesner 1975
alt. 85 m

Small tree, secondary tropical moist forest, Madden Dam.
Flowers yellow, fruit green. Previously collected this tree in
flower! sub #7770 Nov. 4, 1973

Dec. 20, 1973

8909 skipped accidentally 33

Canal Zone, Panamá

17 PPA 152/230

MO, .

8910

Bignon. Martinella obovata (Kunth) Bur. & ^{K. Schum.}
~~Tree~~ ^{Vine} In tree along road 51, 2 km. WSW of
Gatun Dam, alt. 100 m. Edge to premontane
wet forest. det. A. Gentry, 1974

This may be the same vine collected by A. Gentry,
early December, 1973.

17 PPA 130-133/232-5

8911-8925

Premontane wet forest, mostly secondary
along road 51, 4 km. W of Gatun Dam.
alt. 190-200 m.

MO, 5.

8911

Legume. Dioclea paniculata Killip ex Maxwell
Viny shrub on roadside. Petals purple with
green spot at base of standard. det. P.H. Maxwell, 1977.

MO, 6.

8912

Scleria latifolia Sw.
Forest herb.

MO, .

8913

Myrsin. Ardisia bartlettii Lundell
Slender shrub 3 m. tall. Flowers pink,
fruit green. det. C. Lundell, 1984

MO.

8914

Ischnosiphon arouma (Aubl.) Koernicke
Clusters of unbranched stems to 2.5 m.
tall with cluster of leaves at tip.
Flowers red. det. H. Kennedy, 1975

MO, MAD, 18 .

8915

Cephaelis elata Sw. det. J. Dwyer, 1975
MADw 32523. Shrub 5 m. tall, stem
green, leaves stiff. Bracts red, corolla white

MO.

8916

Stromanthe jacquinii (Roem + Schult.) Kennedy & Nichols
Herb 2 m. tall with leaves in cluster at top, orange ^{bracts}

Dec. 20, 1973

Canal Zone, Panama

17PPA.130-3 / ~~232~~ 232-5

- MO, 4. 8917 *Uelastom.*
Shrub 2.5 m. tall. Fruit red.
- MO, 4. 8918 *Uelastom.*
Shrub 2 m. tall. Fruit orange.
- MO, MAD, 9. 8919 *Uelast. Conostegia montana* (Sw.) D. Don vel sp. aff.
MADw 32524. Shrub 5 m. tall. Fruit
turning blue. det. R. L. 1977
- MO, , , , 8920 *Solanum ~~hayesii~~ asperum* L.C. Rich. det. D'Arcy
1974
Brushy roadside shrub 3 m. tall.
Corolla white, closed (5:00 PM.)
- MO, 6. 8921 Flacourt? *Casuarina sylvestris* Sw. var. *sylvestris*
Small tree 7 m. tall. Flowers white. det. H. Steiner
- MO, 13. 8922 *Solanum hayesii* Fern. ! D'Arcy 1974
Tree 8 m. tall, 20 cm. dbh. at edge of forest.
Corolla white, flowers with heavy sweet odor.
- MO, 6. 8923 *Piper*
Spicy aromatic shrub 5 m. tall. Spikes first
hanging, then arching upward till erect, then
hanging again.
- MO, 9. 8924 *Inga goldmanii* Pittier
Tree 8 m. tall. det. J. D. Pennington
- MO, 6. 8925 Sapind.?
Vine in canopy of small tree along road.
Flowers pink.

It was now dark. I started from Summit at 10:00
A.M., took lots of pictures near Madden Dam, visited Helen Kennedy at the Galeta
Marine Lab and now I couldn't collect anymore so went to the beach to camp.

Dec. 21, 1973

Canal Zone, Panama

17PPA 084/295

8926-8928 Sandy area just back of beach, along Caribbean Sea, 1½ km. SW of mouth of Chagres River. alt. 2 m.

MO, F.

8926 Hydrocotyle bonariensis Lam.

Creeping stems mostly under the sand. Petals greenish white, anthers yellow.

MO, b.

8927 Cyperac. Cyperus peruvianus (Lam.) F. N. Williams

MO, 5.

8928 Costus woodsonii Maas det. P. Maas 1979

To 2 m. tall. Bracts red with yellowish center stripe. Outer tepals orange. Stamens yellow.

17PPA 077-083/277-279

8929-8943 Vicinity of towers on Loma La Toba, 3 km. SW of mouth of Chagres River. Tropical wet forest.

8929-8936 Forest with understory disturbed by army activities. alt. 25-75 m.

MO.

8929 Markgravia.

Vine in tree, same vine as collected, 1973 Sub Nee + Gentry # 8620. Bracts bright red, sweetly fragrant although flowers not yet open.

MO, US,

8930 Gram. Paratype Cryptochloa dressleri Soderstr., 1982. Forest herb.

MO, MAD,

8931 Ouratea lucens (HBK) Engl. det. C. Whiteford, 1990. MADw 32525. Shrub 4 m. tall. Fruit green, ^{receptacle} turning red.

Dec. 21, 1973

Canal Zone, Panama

17PPA 077-083/277-279

MO, . 8932 Adiantum lucidum (Cav.) Sw. det. D.B. Lellinger 1977
Terrestrial.

MO, , . 8933 Bactris coloradensis Bailey
In clumps of about 1/2 dozen stems, to 4 m. tall. Entire petiole (including sheathing base) ca. 1 m. long, blade ca. 2 m. long. Petiole channeled on top, this changing to a keel at the first leaflets. Blade plane and evenly pinnate, ^{only} toward tip, the rest of the leaflets in groups of 3-4, the lower ones in each group oriented at ca. 45° angle above the horizontal. Fruit green (eventually turning orange), the uppermost inflorescence from the axil of the lowest living leaf.

MO, 8. 8934 Protium
Tree 12 m. tall, 15 cm. dbh. Fruit light green.

MO, . 8935 Eschnosiphon
Cluster of unbranched stems to 2.5 m. tall with cluster of leaves at top. Flowers red and yellow.

MO, . 8936 Perebea xanthochyma Karst. det. C.C. Berg 1976
Tree 10 m. tall, 20 cm. dbh. with very pale orange sticky ~~resin~~ latex. Stigmas white.

8937-8941 Second growth of Cecropia,
Trichospermum mexicanum. Canopy ca. 8 m. high.
alt. 60 m.

Dec. 21, 1973

Canal Zone, Panamá

17PPA 077-083/277-279

- MO, . 8937 *Lycianthes acidochondra* (B.H.) B.H. det. D'Arcy 1974
Vine. Fruit bright orange.
- MO, , , . 8938 *Asclep. Matelea*
Vine into top of canopy. Fruit yellowish green, with prominent ~~keels~~ keels, ~~ca.~~ the largest ca. 20 x 10 cm., mostly on dead portions of stems and $\therefore$ nearly mature.
- MO, . 8939 *Gurania makoyana* (Lem.) Cogn. det. Wunderlin 1975
Vine. Calyx orange.
- MO, MAD, 15. 8940 *Solanum asperum* ~~Willd.~~ L.C. Rich. ! D'Arcy 1974
MADw 32526. Large foetid shrub 6 m. tall. Corolla white, anthers yellow, berries green.
- MO, MAD, . 8941 *Solanum siparunoides* Ewan det. D'Arcy 1974
S. aturense MADw 32527. Woody vine into canopy.
Dunal. Stem with 4 furrows. Flowers with
det. M. Neo faint thick sweet odor, petals 23 x 4.5 mm.,
1988 with conspicuously purple hairs in bud, these fading as flowers mature. The only fruit seen bright orange, 3 cm. diam.
- MO. 8942 *Myrist. Virola*
Tree 14 m. tall, ²⁵~~35~~ cm. dbh., in forest. Fruit green, with mealy brown pubescence which is readily scraped off. alt. 60 m.
- MO, , . 8943 *Solanum jamaicense* Will. ! D'Arcy 1974
Roadside weed. $\pm$ sprawling shrub 1 m. tall. alt. 60 m.

Dec. 21, 1973

Canal Zone, Panamá

~~17PPA 077-083/277-279~~17PPA 077/~~083~~ 279

8944-8947

Tropical moist forest at junction of Road S-8 and road to towers at Loma La Toba. alt. 45 m.

3 km. SW of mouth of Chagres River.

MO, 9.

8944

~~Mortoniodendron~~ anisophyllum (Standl.) Steyererm. ^{Standl. &}

Tree 8 m. tall, 20 cm. dbh. Fruit turning tan, splitting to reveal the bright orange aril and shiny black seed. det. W. Meijer, 1985

MO, 19.

8945

~~Chrysophyllum~~ [!] Heisteria concinna Standl. ^{det. H. Steyererm.}Tree 5 m. tall. Flowers greenish white, 198-pleasantly fragrant, like Medicago sativa.

MO, MAD,

8946

Rub. Psychotria calophylla Standl.

MADW 32528. Shrub 4 m. tall. Petals pale green, reflexed. det. J. Dwyer, 1975

MO,

8947

Ouratea

Shrub. Petals light orange in bud.

[In my field notebook I had "vine into tree", surely a mistake! ?]

17PPA 121/258

8948-8949

Premontane wet forest along Road S1 as it climbs the hill 1 km. SE of Camp Piña, 6 km. WNW of Gatún Dam. alt. 125 m.

MO,

8948

Bignon.

Vine in tree. Corolla white with yellow lines in throat, musky fragrant.

MO, 23.

8949

Olmecia aspera Ruiz & Pav.Small tree with very pale yellow milky sap.
♂ det. J. Conrad, 1975

Dec. 21, 1973

39

Canal Zone, Panamá

17PPA 121-2/251-4

8950-8954 Premontane wet forest along road 51,
1½ km. SE of Camp Piroa, 6½ km. WNW
of Gatun Dam. alt. 165 m.

MO, 16.

8950 Calliandra

Tree 8 m. tall, common at edge of forest
along the road for only about 2 km.
in this vicinity. Filaments and style
white at base, pale purple distally. Fruit
green, erect.

MO, 4.

8951 Phyllanthus urinaria L.

Roadside weed.

MO, 8.

8952 Paullinia

Vine in tree at edge of forest. Flowers
fragrant, petals white, stamens yellow.

MO, 17.

8953 Heisteria fatioensis Standl. H. scandens Ducke

Vine hanging out of tree, to at least 10 m.
Flowers greenish. Fruit ~~green~~^{red}, calyx ~~green~~^{green}.

MO, 12.

8954 Hampea appendiculata (J.D.Sm.) Standl.

Tree 12 m. tall, 20 cm. dbh. Gland on calyx
green. Fruit light brown, aril white.

Dec. 24, 1973

Canal Zone, Panamá

I.P.P.A. 485/022

MO, 29.

8955

Lecythis

Cultivated tree 15 m. tall, 1 m. dbh. abundantly flowering, a tree of the same species next to it sterile and beginning to loose leaves, another with many leaves already gone. When young, petals purple, fringed with white, hood darker purple with yellow stamens and staminodes. Flowers fading nearly to white, then falling, ~~fragrant~~ lightly fragrant with odor similar to that of *Syringa vulgaris* but somewhat sharper. The abundant faded rotting flowers littering the ground giving off a sweet fragrance and attracting more small pollen gathering bees than the living flowers. Summit Gardens. alt. 80 m.

8956-8969

At 0-2 m. from ground on Lecythis # 8955.

US.

8956

Graphid.

US, 5.

8957

" "

US, , .

8958

" "

US.

8959

lichen

US.

8960

" "

US, .

8961

" "

US, 4.

8962

" "

US.

8963

" "

US.

8964

" "

US.

8965

" "

US.

8966

" "

Dec. 24, 1973

41

Canal Zone, Panamá

17PPA 485/022

- MO. 8967 moss
mo 8968 ~~leaf~~ moss. Calymperes erosum C. Mull.
F. 8969 hepat.

17PPA 488-490/090-3

8970-9000

Secondary tropical moist forest, ^{much of it brushy} and roadside at end of "abandoned" road C-29, 6 km. E. of Gamboa. alt. 160-190 m.

- MO, , , 8970 (Faramea) Alibertia edulis (Rich.) Rich. det. J. Dwyer, 1975
Shrub 4 m. tall, many stems from base.

- MO, , , 8971 ^{Th. alata Bojan det. D. W. Keck, 1978} Acanth. Thunbergia erecta (Benth.) Anders. det. L. D. Keck, 1977.
Shrub 2 m. tall. Corolla blue with yellow throat.

- MO, , , 8972 Solanum subinerme Jacq. ! D'Arcy 1974
Shrub 3 m. tall. Flowers with thick sweet odor, corolla blue-purple, anthers yellow.

- MO, , , 8973 Legume.
Scrambling to 2 m. Leaves sensitive.
Filaments white.

- MO, , , 8974 Helicteres guazumifolia HBK. det. R. L. Nielsen, 1978.
Shrub 2 m. tall. Petals bright red.

- MO, MAD, , 8975 Perebea xanthochrysa Karsten det. J. Conrad, 1975
MADw 32529. Small tree 6 m. tall with pale orange milky sap. Fruit light green.

- MO. 8976 Maripa
Small woody vine.

- MO, , , 8977 Blechnum occidentale L. f. occidentale det. D. B. Lellinger, 1977
clay bank.

Dec. 24, 1973

Canal Zone, Panamá

17PPA 488-490/090-093

- MO, , , . 8978 fern. Thelypteris opulenta (Kaufl.) Fosb.
Shady roadside. det. D.B. Kellinger 1977
- F. 8979 hepat.
clay bank.
- MO, 8980 moss
clay bank
- MO, , , . 8981 Kohleria tubiflora (Cav.) Haussk. det. L.E. Skog 1977
Flowers bright orange.
- MO, , , . 8982 Xiphidium caeruleum Aubl.
Fruit red orange.
- MO, , , , . 8983 Adiantum humile Kunze det. D.B. Kellinger 1977
clay bank.
- MO, 5. 8984 Melastom.
Small shrubs 2 to 2 m. tall, with ridged
stems. Petals pink. Fruit turning dark red.
- MO, . 8985 Dicranopteris pectinata (Willd.) Underw.
Viny, to 1 m. det. D.B. Kellinger 1977
- MO, , . 8986 Melastom.
Slender shrub 2 m. tall. Fruit green.
- MO, 4. 8987 Scleria secans (L.) Urb. det. G. Davidse, 1977
Tangled vine to 4 m. in shrubs.
- MO, , , . 8988 Lycopodium cernuum L. ! D.B. Kellinger 1977
roadside.
- MO, , , . 8989 Rub. Psychotria capitata Sw. det. J. Dwyer, 1975
Shrub 1 m. tall, leaves stiff. Corolla white,
yellow at base of lobes. Fruit purple.
- MO, , , , . 8990 Cephaelis tomentosa Aubl. det. J. Dwyer, 1975
Shrub 2 m. tall. Bracts bright red.

Dec. 24, 1973

Canal Zone, Panamá

17PPA 488-490/090-3

- MO, , . 8991 Gonzalagunia aff. cornifolia (HBK.) St. det. J. Dwyer, 1974
Arching shrub 0.5 m. tall. Fruit white.
- MO, 19. 8992 Rub. mannettia reclinata L. det. J. Dwyer, 1975
Tangled vine on low shrubs. Corolla red, fruit green.
- MO, , . 8993 Rub. Psychotria undata Sw. det. C. Hamilton
Shrub 1 m. tall. Corolla white.
- MO. 8994 Elephantopus mollis HBK. det. R. L. 1976
- MO, . 8995 Acanth.
Viny shrublet 1.5 m. tall. Flowers purple and white.
- MO, . 8996 Cassia fruticosa Mill. det. R. Liesner, 1975
Shrub 2.5 m. tall. Flowers dull yellow.
- MO, MAD, 22. 8997 Rub.
MADw 32530. Shrub 5 m. tall. Fruit green, turning white.
- MO, MAD, 15. 8998 Triumfetta bogotensis DC.
MADw 32531. Shrub 3 m. tall. Bark stringy, sap mucilaginous. Flowers yellow.
- MO, 10. 8999 Cynoctonum mitreola (L.) Britt.
On shallow soil of old cement foundation in thicket. Corolla white.
- MO, 4. 9000 Pothomorphe
1 m. tall.

17PPA 489/092

9001-9011 Weeds of open gravel at end of "abandoned" road C29, 6 km. E of Gamboa. alt. 190 m.

Dec. 24, 1973

Canal Zone, Panama

17PPA 489/092

MO, 6.

9001

Legum

Herbaceous vine. Flowers blue.

MO, , , .

9002

Mimosa

Decumbent. Leaves sensitive.

MO, 4.

9003

Desmodium

MO, 5.

9004

Benthamia Schultesia lisianthoides (Griseb.) Benth. & Hook. ^{det. R.L. 1977}

MO, .

9005

Aeschynomene americana L. det. R. Wierner, 197-

MO, 3.

9006

Sida

herb to 1 m. tall.

MO, 5.

9007

Ischaemum

MO.

9008

Chamaesyce dioica (HBK.) Millsp. ? det. R.L. 1976
prostrate.

MO, , .

9009

Bam.

Shady roadside gravel. Anthers orange, stigma red.

MO, , , .

9010

Digitaria

Shady roadside gravel.

MO, , , .

9011

Panicum

Shady roadside.

X X X X X X X X X X

Dec. 25, 1973

Canal Zone, Panama

17PPA 427/078

MO, .

9012

Eragrostis ciliaris (L.) R.Br.

Crack in sidewalk, Gamboa. alt. 30 m.

Dec. ~~24~~ 27, 1973

45

Canal Zone, Panamá

17 PPA 485/089-091

- MO. 9013-9017 Tropical moist forest along trail from end of "abandoned" road C29 down to headwaters of Río Casaya. 6 km. E of Gamboa. alt. 100-180 m.
- MO. 9013 Convolv.
Vine at ca. 15 m. in canopy of tree. Ground littered with fallen flowers (only these collected). Corolla pale purple, almost black at base within. Fallen flower about ready to open had thick sweet odor like that of Solanum hayesii.
- MO. 9014 Gram. Pharus
- MO, 6. 9015 Piper
1.75 m. tall shrub. Spikes hanging.
- MO, 9. 9016 Piper
Shrub 2 m. tall. Spikes erect.
- MO. 9017 Solanum arboreum Dun. det. D'Arcy 1974 ???
Shrub 1 m. tall. Fruit green.
- ~~9018~~ 9018-9033 ^{now nearly dry} Along quebrada, headwaters of Río Casaya, tropical moist forest. 6 km. E of Gamboa. alt. 100 m.
- 9018-9025 on huge boulders blocking quebrada in one area.
- MO, 4. 9018 Selaginella flagellata Spring
The much-branched fertile portion light green, arched above surface, the tip rooting and forming a trailing little-branched portion that is blue-green, almost iridescent. det. D. A. Selleniger
! A. R. Smith, 1985 1983

Dec. 27, 1973

Canal Zone, Panamá

17PPA 485/089-091

- MO. 9019 fern. *Gymnopteris rufa* (L.) Underw. det. D.B. Gellinger 1977
- MO. 9020 *Begonia plejeba* Liebm. det. K. Burt-Utley 1976
Petals white with faint pink tinge.
- MO, , , . 9021 ?
Slender arching shrubs 1½ m. tall. Buds and young fruit orange. Flower parts turning red, with an exposed mass of shiny black seeds.
- MO, , , . 9022 fern. *Belbitis cladorrhizans* (Spreng.) Ching
Fronds dimorphic.
- MO, , . 9023 *Dieffenbachia longispatha* Engl. & Krause
Caudex 6-8 cm. thick, crawling over boulders, upturned at tip. Plant with a strong, repulsive skunk-like odor. Inflorescence curved, spathe green. Fruit yellow orange, mostly two lobed, each lobe ca. 2 x 1 cm., juicy and with faint sweet odor, seeds brown to black. The milky sap ~~left~~ ^{left} my hand, ~~an~~ ^{with} unpleasant tingling sensation for two hours and red ~~sore areas rem.~~ areas remained sore for several days. A most ~~to~~ obnoxious plant.
- MO, . 9024 *Anthurium tetragonum* Schott det. T. Croat, 1975
Acaulescent, from a root mass. Variable in size. One seen on a large tree trunk.
- MO, 6. 9025 *Asplenium perratum* L. ! D.B. Gellinger 1977
From a felty brown root mass.

9026-9033 Along rocky quebrada.

Dec. 27, 1973

47

Canal Zone, Panama

17 PPA 485-1089-091

MO, , .

9026 fern Asplenium otites Link det. D.B. Lellinger
Stones in stream and rocky bank. 1977
A.R. Smith 1985

MO, , .

9027 Myrt.

Spreading shrub 2 m. tall. Buds only.

MO, , , .

9028 Dictyoxiphium panamense Hooker det.
Terrestrial. D.B. Lellinger 1977

MO, , .

9029 Peperomia glabella (Sw.) A. Dietr. det. R.L. 1976
Fallen log.

MO.

9030 Vittaria

Fallen log.

MO, 7.

9031 fern Cyclopeltis semicordata (Sw.) J. Sm.
terrestrial. det. D.B. Lellinger 1977

MO, MAD, 25.

9032 Solanum arboreum Dun. det. D'Arny 1974
MADw 32532. Shrub 2 m. tall arching over
stream from rocky bank. Flowers hanging, ^{odorless,}
fruit erect. Corolla white, anthers yellow.
Flowers visited by bees which hang onto the
anthers upside down and buzz, making about 5
one-fifth turns before flying off to another
flower.

MO, 7.

9033 Picramnia

Shrub 4 m. tall. Inflorescence hanging.
Anthers red before opening

Dec. 27, 1973

Canal Zone, Panamá

17PPA 489/092

9034-9037 At end of "abandoned" road C29, 6 km. E of
Gamboa. alt. 190 m.MO, 9034 Moss.
On soil in dense patch of *Saccharum spontaneum*.MO, ~~9035~~ 9035-9037 Open gravel of road.
9035 Rub. *Borreria densiflora* DC. det. J. Dwyer 1980
Corolla white.MO, 9036 Scroph. *Lindernia crustacea* (L.) F. Muell. det. J.H. 1974

MO, 9037 Rub.

17PPA 490-3/085-8

9038-9049 Tropical moist forest and roadside along "abandoned"
road C29 just N of Las Cruces Trail, 6 km. ~~SE~~ E
of Gamboa. alt. 150 m.MO, 9038 *Sauvagesia*
Roadside. Petals pink, readily falling.MO, 9. 9039 Gram.
Roadside.MO, 9040 Lab.? *Salvia hyptoides* Mart. & Gal.
Weedy road gravel. Corolla blue.MO, 5. 9041 *Melastom*.
Shrub 3 m. tall. Petals white.MO, 9. 9042 *Cordia linnaei* Stearn det. R. Liesner, 197-
Scandent shrub 2 m. tall. Calyx turning red.MO, 5. 9043 *Virola*
Small tree 6 m. tall. Fruit green, covered
with brown mealy pubescence which is
easily rubbed off.

Dec. 27, 1973

Canal Zone, Panama

17PPA 490-3/085-8

MO, , , ,
 , , .

9044 *Solanum* ^{aff.} *hayesii* Fern. det. D'Arny 1974
Slender tree 6 m. tall with spines on trunk.
Flowers with thick sweet odor, corolla white,
anthers yellow.

MO, 9.

9045 *Siparuna pauciflora* (Beurl.) ~~Per~~ A. DC. det. Humbles
Shrub 4 m. tall. Floral disc first green,
then yellow. Crushed leaves causing
an unpleasant sensation in the nose.

MO, 6.

9046 *Piper sancti-felicii* Trel. det. J.C.
Shrub 2 m. tall. Spikes erect.

MO, MAD, 30.

9047 *Myrsin. Ardisia* ^{Jcm. det.} ~~aff.~~ *colombensis* Lundell
det. C. Lundell, 1979
MADu 32533. Slender tree 8 m. tall with
very hard wood. Fruit green with
slightly raised green glands, these eventually
turning black after being damaged.
Fruit mostly green, a few turning dark
purple.

MO, .

9048 *Cespedesia macrophylla*
Slender unbranched young tree 3 m. tall
Several others present here, up to 8 m. tall.

MO, 8.

9049 *Dalechampia tiliifolia*
Vine on roadside shrubs. Bracts very pale
green. Gland yellow, sticky.

ca. 17PPA 488/070

9050-9051 Roadside along "abandoned" road C29, through
tropical moist forest. 6 km. E of Gamboa.
alt. ca. 200 m.

Dec. 27, 1973

Canal Zone, Panama

17PPA 488/070

MO,

9050

Cucurb. Rytidostylis ciliata (Cogn.) Kuntzedet. Wunderlin
1975Vine in shrubs. Fruits light green with soft
spines, dehiscing explosively, seeds white.

MO, 13.

9051

~~Flacourtia~~ Eupho. Adelia triloba (Muell. Arg.) Hemsl.

Shrub 4 m. tall. Flowers greenish white.

det. R. Liesner, 1975

17PPA 485/089-091

9052-9054 On #9033

F.

9052

hepat.

Epiphyllous.

F.

9053

~~moss~~ hepat.
on twigs.Neckeropsis undulata (Hedw.) Reich.

MO.

9054

moss

on twigs.

Dec. 28, 1973

Canal Zone, Panamá

17 PPA 478/027

MO, 43.

det. M. C. Johnston, 1974

- 9055 Colubrina glandulosa Perkins var. glandulosa
 Small tree 8 m. tall, 20 cm. dbh. Along
 Gaillard Hwy. 1 km. NW of Summit Garden,
 alt. 80 m. Edge of secondary tropical moist
 forest. Flowers yellowish green, sweet
 smelling but suggesting horse urine. Same tree
 coll. in fruit Feb. 8, 1974 sub # 9562.

17 PPA 467/039

MO, 35.

- 9056 Combretum fruticosum (Loefl.) Stuntz det. R. L., 1975
 Woody vine in top of 6 m. tall small tree.
 Along Gaillard Hwy., 2 1/2 km. NW of Summit
 Garden, alt. 75 m. Edge of ^{secondary} tropical moist
 forest. Inflorescence brushlike, one sided
 with ~~fil~~ stamens pointing upward. Flowers
 yellowish green, anthers reddish, nearly
 odorless, filled with nectar.

17 PPA 456/048

MO, 35.

- 9057 Paullinia fibrigera Radlk. det. T. Croat, 1974
 Woody vine to at least 8 m. at edge of
 tropical moist forest along Gaillard Hwy,
 4 km. NW of Summit Garden. alt. 70 m.
 Fruit red, usually one of the three valves
 falling away to reveal the usually single brown
 seed almost entirely ~~surrounded~~ by enveloped
 by the astringent tasteless white aril. On
 some inflorescences, "leafcutter" ants are
 removing the aril piecemeal.

Dec. 29, 1973

Canal Zone
~~Prov. Colon~~, Panamá

17PPA 420/086

MO, 32.

9058 *Bombacopsis sessilis* (Benth.) Pittier

Tree 8 m. tall, 25 cm. dbh. Edge of secondary tropical moist forest, along road to radar station, halfway up Cerro Pelado, 1/2 km. NW of Gamboa. alt. 100 m. Petals half green, the half exposed in bud is reddish. Filaments white when opening, tan when collected (5:00 PM). Style red. Same tree coll. in fruit Apr. 2, 1974 sub # 11018.

17PPA 423/089

9059-9062 Secondary tropical moist forest near summit of Cerro Pelado, 1 km. N of Gamboa. alt. 200-220 m.

MO, , , ,

9059 *Witheringia solanacea* L'Her. det. D'Arcy 1974

1 m. tall, edge of forest along road to radar station. Petals yellow, anthers white. Fruit turning orange.

MO, MAD, 8.

9060 *Ormosia panamensis* Benth.

MADw 32534. Tree 12 m. tall, 14 cm. dbh, wood relatively soft, cut trunk exuding a clear sticky sap. Fruit old, falling when tree cut, seeds red.

MO, MAD, , .

9061 *Toxomita stylosa* Hemsl. ! D'Arcy, 1980.

MADw 32535. Shrub 2 m. tall. Inner bark red with scant sticky yellow latex. Fruit brown.

MO, MAD, 13.

9062 *Piper multiplinervium* C. DC. det. J. Conrad 1974

MADw 32536. Woody vine to top of 6 m. tall *Pera arborea* at edge of radar clearing.

Dec. 29, 1973

53

Canal Zone, Panamá

17 PPA 423/089

with Davilla aspera, Dicranopteris ~~pectinata~~ ^{pectinata}
and other vines. Stem 3 cm. diam. at base,
wood specimen from 4 m. above ground,
nodes swollen. Spikes erect, yellow.

US.

9061a Phelotome
on stem of 9061.

Dec. 30, 1973

Prov. Colón, Panamá

I7PPA 529-532/340-347

9063-9093

Premontane wet forest along dirt trail, 4 km. NW
of Salamanca, 13 km. NE of Buenos Aires.
alt. 340-410 m.

- MO, , . 9063 ? Borag. Tournefortia angustiflora Ruiz & Pav.
Herb. Corolla white at tip. Roadside. det. R. Liesner,
197-
MO, , . 9064 Cassia fruticosa Mill. det. R. Liesner, 1975
Shrub 2 m. tall. Petals yellow, fruit green.
MO, , , . 9065 Solanum asperum L.C. Rich. det. D'Arcy 1974
Shrub 3 m. tall. Corolla white, fruit green.
MO, , . 9066 Apoc. Mandevilla hirsuta (L. Rich.) K. Schum.
Vine in shrub. Corolla pale yellowish, ~~red~~
throat red within.
MO, , . 9067 Rub. Contarea hexandra (Jacq.) Schum.
Shrub 4 m. tall. Fruit green. det. J. Dwyer, 1975
MO, 6. 9068 Centropogon coccineus (Hook.) Regel ex B.P. Jacks.
Herb 1 m. tall. Corolla bright red. det. R. L. Wilbur
1976
MO, 4. 9069 ? Chrysophyllum Heisteria concinna Standl.
Small tree. Flowers green. det. H. Slemmer. error? no. in
MO, 4. 9070 Pavonia dasypetala
Shrub 2 m. tall. Petals pink.
MO, , . 9071 Hemingia strobilifera
Shrub 2 m. tall.
MO, , , . 9072 ? Dioscorea mexicana Scheidw.
Vine in shrubs. det. O. Téllez, 1986
MO, , , 9073 Solanum hayesii Fern. ! D'Arcy 1974
Tree 5 m. tall. Corolla white, anthers yellow

Dec. 30, 1973

Prov. Colón, Panamá

17PPA 529-532/340-347

- MO, , , . 9074 Melastome
Shrub. Fruit green.
- MO, . 9075 Mucuna see notes under 7632.
Vine in small tree. Fruits tannish green.
- MO, , , . 9076 Rub. Psychotria capitata Ruiz + Pav. det. J. Dwyer, 1975
Shrub 1 m. tall. Leaves stiff. Inflorescence white. Corolla white with yellow throat.
- MO, , . 9077 Canavalia
Vine in shrub. Various parts of flower white purple and pink, beautifully fragrant. Fruit green.
- MO, 7. 9078 Leg. - Mimos.
Tree 10 m. tall. Stamens white, anthers yellow-green.
- MO, . 9079 Cespedesia macrophylla
Young unbranched sterile tree 3 m. tall.
- MO, 4. 9080 Melastom.
Shrub 1 m. tall. Fruit pink, turning purple.
- MO. 9081 Solanum americanum Mill. : D'Arcy 1974
Herb. Corolla white, anthers yellow. Fruit very dark purple. Roadside.
- MO, , , , . 9082 Witheringia solanacea L'Her. det. D'Arcy 1974
Shrub 1 m. tall. Corolla yellow, fruit green. Roadside.
- MO, 5. 9083 Asclep. ? Cynanchum recurvum (Rusby) Spellman. det. D. Spellman 1974
Vine in shrubs, sap milky. Flowers pale green.

Dec. 30, 1973

Prov. Colón, Panamá

17PPA 529-32/340-47

MO, 4.

9084 ? *Cecropia obtusifolia* Bertol.Tree 15 m. tall, 20 cm. dbh. Infested with
± innocuous ants. Leaves light green beneath.

MO, , .

9085 *Heliconia vaginalis* Benth. det. J. Gentry &Herb 2 m. tall. Bracts red, distichous.
Flowers yellow, green at tip.

MO, , .

9086 *Ischnosiphon*Clumps of ~~terete~~ stems to 3 m. tall with
cluster of leaves at tip.

MO, , .

9087 *Poulsenia armata* (Miq.) Standl. ! Conrad

Tree 8 m. tall. Fruit green. Spines very sharp.

MO, .

9088 *Melastomo.*

Shrub. Fruit turning from orange to purple.

MO, 4.

9089 *Melastome.*

Shrub.

MO, .

9090 Rub. *Psychotria racemosa* Sw.

Shrub 1 m. tall. Fruit orange. det. J. Dwyer, 1975

MO, , , .

9091 Rub. *Psychotria marginata* Sw. det. J. Dwyer, 1975

Shrubs to 2 m. tall. Corolla yellow.

MO, , .

9092 *Guatteria amplifolia* Triana + Planch.Shrub 3 m. tall. The single flower seen
was green.

MO, , , .

9093 *Bombacopsis sessilis* (Benth.) P. HierSmall tree along trail and pasture. Branches
whorled. The petals half green, half red (where
exposed imbud). Stamens white when flower
first opens. Style red.

Dec. 30, 1973

9097 Siparuna pauciflora (Beurl.) A. DC.det. Humbles acc. to a determination
list I received 1976. Mikee

Prov. Colón, Panamá

77 PPA 530-533/333-340

9094-9102

Open pasture slopes with some brush and a
few scattered small trees, remnants of tropical
moist forest. 3-4 km. NW of Salamanca, 13 km NE of
Buenos Aires.
alt. 200 - 340 m.

MO,

9094 Contoubea spicata Aubl. det. R. L. 1977.

Corolla white.

MO,

9095 Urena lobata L. var. lobata

Herb 1.5 m. tall. Petals pink.

MO,

[9097]

9096

Iseria haenkeana DC. var. haenkeanaShrub 2 m. tall. Whole inflorescence bright
red when in fruit. det. B. Boom, 1984

MO,

9098

Malpigh. Stigma phyllon lindenianum Juss. 1975

Vine in shrubs. Petals yellow. det. T. Coats,

MO, 6.

9099

~~9098~~ IngaSmall tree. Calyx and corolla green,
filaments white.

MO,

9096

Melastome.

Shrub 2 m. tall.

MO,

9100

Luehea speciosa Willd.Small tree. Flowers beautifully fragrant.
Calyx light green. Petals and stamens white
when first opening. Stigma pale green,
glistening with liquid but not sticky.

MO, 6.

9101

IngaSmall tree. Largest fruit seen 47 cm. long,
7 cm. wide, conspicuously twisted, green and
soft with thick fuzzy tan pubescence.

Dec. 30, 1973

Prov. Colón, Panamá

17PPA 530-533/333-340

MO, , .

9102 Hymenaea courbaril L.

Small tree. Fruit brown and green, exuding a sticky clear sap especially when heated.

MO 17PPA 533-4/327-332

9103-9113

M

Remnants and ^{much disturbed} Secondary tropical moist forest along Quebrada Bonita, 3 km. NW of Salamanca, 13 km. NE of Buenos Aires. alt. 100-170 m.

M MO, , , , ,

9103 Solanum (Brevantherum) rugosum Dun. det. D'Arcy 1974

Shrub 2 m. tall. Corolla white, fruit green.

M MO, .

9104 Heliocarpus

Small tree 4 m. tall. Sap mucilaginous. In bud.

MO.

9105 Phyllanthus urinaria L.

M MO, .

9106 Comp. Schistocarpha oppositifolia (Ktze.) Rydb.

1 m. tall. Disc yellow. det. R. L. 1977

M MO, b.

9107 Legum.

Flowers pale orange.

M MO, b.

9108 Triumfetta

1.5 m. tall. Stamens yellow.

M MO.

9109 Passiflora vitifolia HBK. det. A. Gentry, 1975

Vine in shrubs. Flower bright red.

M MO, b.

9110 Myriocarpa

Shrub 3 m. tall, common. Sap mucilaginous.

M

Inflorescence pale green.

MO, II.

9111 Legum.

Small tree. Filaments white. Flowers fragrant.

M

MO, , .

9112 Acanth. Aphelandra sinclairiana det. L. H. Durkee 1977

Shrubs 1.5 m. tall. Bracts orange, corolla dark pink.

Dec. 30, 1973

Prov. Colón, Panamá

17PPA 533-4/327-332

MO, , .

9113 ? Connarus lambertii (Dc.) Sagot.
Shrub. det. E. Forero, 1984

17PPA 535/325

MO, 14.

9114 Inga ruiziana G. Don det. T. D. Pennington
Small tree 4 m. tall left in pasture along
Quebrada Bonita, 2 Km. NW of Salamanca. alt. 90 m.
Filaments white, anthers pale yellowish
green. on road to Rojas.

17PPA 535/324

9115-9118 Open weedy roadside at Quebrada Bonita.
on road to Rojas. 2 Km. NW of Salamanca.
alt. 90 m.

MO, 9.

9115 ? Cassia stenocarpa Vog.
Flowers yellow. det. R. Liesner, 1975

MO, 6.

9116 Amaranth.
Viny herb to 1 m. in fence row.

MO, 5.

9117 Amaranthus
Herb 1.5 m. tall. Stems and midribs
reddish.

MO, 28.

9118 Crotalaria
1 m. tall bushy herb. Flowers odorless,
petals yellow.

17PPA 542/315

9119-9120 Floating in shallow water at edge of bay of
Madden Lake, "Salamanca" 1 Km. W of old town. alt.

MO, , , , .

9119 Fern. Ceratopteris pteridoides (Hook) Hieron. D.L., 1977 ^{80 m.}

MO, .

9120 Gram.

Dec. 30, 1973

Prov. Colón, Panamá

17 PPA 473-6/262-4

9121-9132

Brushy disturbed tropical moist forest remnant lining Quebrada Ancha incised into limestone. 3 km. N of Cement Plant, ~~4~~ 4 km. ENE of Buena Vista, along road to Sardinilla. alt. 100 m.

M. MO, , .

9121

Malva viscus arboreus Cav. var. mexicanus Schlecht.
Slender shrub 2 m. tall. Petals red.

M. MO, .

9122

Bignon. Cydista diversifolia (HBK.) Miers
Vine in tree. Fruit green. det. A. Gentry, 1974

M. MO, , , , .

9123

Acanth. Justicia pectinata det. G. H. Durkee 1977
1 m. tall. Common. Corolla red.

M. MO, .

9124

Laciasis

MO, , , , .

9125

Logonopus speciosus (Jacq.) K. Schum.
Shrub 3 m. tall. Calyx lobe bright red, corolla pink within det. J. Dwyer, 1975

MO, 5.

9126

Scalypha diversifolia Jacq.
Shrub.

MO, 7.

9127

Myrt. ? Eugenia cersteddeana Berg. det. R. L.
Shrub 4 m. tall. Petals, stamens and style white.

M. MO, 4.

9128

Flacoust Euphorb. Adelia triloba (Muell. Arg.) Hemsl.
Shrub 4 m. tall. Flowers greenish white.

M. MO, 13.

9129

Pithecolobium longifolium (H. & B.) Standl.
Tree 4 m. tall. Fruit green.

M. MO, , .

9130

Hura crepitans L.
Young tree 5 m. tall, trunk spiny, sap oily. Fruit green.

MO.

9131

Calathea latifolia (Willd. ex Link) Klotzsch.
Herb. Head cylindric, 5 x 11 cm. when fresh.

Dec. 30, 1973

* 9133-9134 see page 21

* 9135 filled see p. 10

61

Prov. Colón, Panamá

17PPA 473-6/262-4

Bracts now turning brown, green(?)
originally. Seeds pale blue. Leaf with
~~two purplish~~ ^{purplish} strips on ~~middle~~ middle of
each side ~~below~~ beneath. det. H. Kennedy

MO, 20.

9132 Adelia triloba (Muell. Arg.) Hemsl.

Shrub. Fruit green.

Jan. 3, 1974

Prov. Coclé, Panamá

17PNU 960-966/545-6

9136-9181 Disturbed tropical wet forest and roadside. La Mesa. alt. 875 m. 4 km. N of El Valle.

- M MO, , , . 9136 *Jabaelmaemontana longipes* Donn. Sm. ^{A. Gentry} ~~A. Gentry~~
Shrub 4 m. tall, sap milky, fruit green.
- M MO, . 9137 Aquif. *Ilex*
Branch fallen from tree? Nearly leafless.
- M MO, b. 9138 ~~Arac.~~ *Dendropanax punctatus* M. & J. Cannon
^{det. M. Cannon, 1981} Shrub 5 m. tall. Flowers and fruit green.
- M MO, , , . 9139 ~~markgr.~~ *Fontelea hondurensis* A. C. Sm.
Vine? Fruit green. det. A. Mennega, 1989
- MO. 9140 Eric. *Psammisia ramiflora* Kl.
Vine. Flowers red. det. R. Wilbur, 1977
- MO, , . 9141 *Melastom.*
Small tree. Fruit and bracts green.
- MO. 9142 *Spathiphyllum Anthurium allenii* Standl. ^{det. J.C. 1975}
Terrestrial. Spathe and spadix green.
- MO, . 9143 *Anthurium vailense* Croat det. T. Croat 1978
Semi-viny, at base of tree. Spathe green.
Spadix green, reddish when young.
- M MO. 9144 *Piper*
Shrub 1 m. tall.
- M MO. 9145 *Piper aequale* Vahl det. J. Conrad, 1975
Shrub 1 m. tall. Spikes erect.
- M MO. 9146 ~~Arac.~~ *Schefflera systyla* (J. D. Sm.) Viguier
Woody vine(?) or shrub to 4 m. tall.
det. M. Cannon, 1988

Jan 3, 1974

63

Prov. Coclé, Panamá

17 PNV 960-966/545-6

MO, 5.

9147 Annon. Guatteria inuncta R. E. Fr. det. R. Lierny, 1972

Shrub. Fruit dark purple, stripes red.

MO.

9148 Eric. Psammisia ramiflora Kl. det. R. Wilbur, 1976

Epiphytic shrub or vine. Flowers hanging, odorless. Corolla bright waxy red at base, white (occasionally pink) at tip.

MO, .

9149 (I. Shinosiphon) Plelostachya leiostachya (D. Sm.) Hammel
Herb 1.5 m. tall. Bracts green. det. B. Hammel, 1985

MO, .

9150 Laurac.

Slender shrub 3 m. tall. Inflorescence red, fruit green.

MO, , .

9151 Clusia salvini Donn. Sm. det. D'Arcy, 1980.

Tree. ~~Fruit~~ Fruit light green, old stigmas dark brown.

MO, , , .

9152 Rosegueria Genipa vulcanicola Standl.

Small tree. Fruit green. det. J. Dwyer, 1975

MO, , .

9153 Souroubea Marcgravia atropunctata de Roon
Vine. Fruit green. det. H. Bedell, 1982

MO, 7.

9154 (Rapanea) Myrsine jurgensenii (Mez) Lundell
Small tree. det. J. J. Pipoly, 1984

MO, .

9155 Orchid

Epiphyte. Flowers odorless. Petals yellow green, with red tinge. Lip glossy red.

MO, , , .

9156 Melastome.

Petals purple.

MO, 7.

9157 Myrsin?

Fruit pale greenish purple.

Jan. 3, 1974

Prov. Coclé, Panamá

17PNV 960-66/545-6

- mo. 9158 *Eric. Satyria warszewiczii* Kl.
Epiphytic vine. det. R. Wilbur, 1979
- mo. 9159 *Guttif. Tovomita nicaquensis* (Verst.)
Shrub 2 m. tall. R. Liesner, 1975 Planch. & Triana
- mo. 9160 *Besner. Paradrymonia decurrens* (Morton) Wiehl
Epiphyte. det. G.E. Skog 1978
- ~~9161~~
- mo, MAD, , , 9161 *Solanum antiMarum* O.E. Schulz det. D'Arcy 1974
MADw 32537. Shrub 2 m. tall. Corolla white, anthers yellow.
- mo, , , , 9162 *Solanum rugosum* Dun. ! D'Arcy 1974
Shrub 3 m. tall. Corolla white.
- mo, , , , 9163 *Solanum hayesii* Fern. ! D'Arcy 1974
Shrub 3 m. tall, trunk spiny. Flowers with thick sweet odor, corolla white.
- mo, 4. 9164 *Cordia eriostigma* Pitt. det. R.L. 1976
Shrub 3 m. tall. Corolla white.
- mo, , . 9165 *Lycianthes cf. multiflora* Bitter det. M. Neo, 1997
Viny shrub. Fruit greenish white.
- mo, MAD, , , , 9166 *Solanum accrescens* Standl. & Mort. ! D'Arcy 1974
MADw 32538. Shrub 2 m. tall. Corolla white, fruit green.
- mo, 6. 9167 *Sloanea platyphylla* Standl.
Small tree 5 m. tall. Fruit green, spiny, splitting to reveal bright red interior, seed bright orange, aril white.
det. D.A. Smith, 1986.

Jan. 3, 1974

Prov. Coclé, Panamá

17PNV 960-66 / 545-6

MO.

9168 *Anthurium wendlingeri* Barroso det. T. Croat 1979
Epiphyte on tree trunk. Spathes fallen,
spadix light brown, spiral.

MO, , .

9169 *Eric. Cavendishia axillaris* A.C.Sm. det. J. Luteyn ¹⁹⁷⁵
Epiphytic shrub. Bracts red, corolla
yellowish green.

MO, , , .

9170 *Loranth.*
Epiphytic shrub ca. 1.5 m. tall, hanging
out tree.

MO, , , .

9171 *Miconia*
Small tree.

MO, , , , .

9172 *Aegiphila anomala* Pittier det. R. Liemer, 1975
Tree 7m. tall. Fruit turning pale yellow.

MO, .

9173 *Centropogon*
To 3m. tall, shrubs. Corolla red. Sap milky.

MO, 8.

9174 *Dioscorea racemosa* (Kl.) Uline det. F. Ayala 1976
Vine in roadside shrubs. Flowers light
purple. ~~Fruit~~ Fruit green to light purple.

MO, 10.

9175 *Meliosma glabrata* (Liebm.) Urb. det. A. Gentry
Tree. Fruit green. *M. grandiflora* A. Gentry

MO, .

9176 *Rub. Schraderi blumii* ^{det. A. Gentry}
^{Dwyer + Hayden} ^{det. J. Dwyer,}
Shrub. Inflorescence greenish white. ¹⁹⁷⁵

MO.

9177 *Gesner. Columnea hirsutissima* Morton det. L.E. Skog
Epiphyte. Corolla red. ¹⁹⁷⁷

MO, , , , , .

9178 *Browalia americana* L. det. D'Arcy 1974
Roadside. Corolla blue with yellow
spot on throat.

Jan. 3, 1974

Prov. Coclé, Panamá

17PNV 960-66/545-6

- mo, , , . 9179 *Piper fimbriatum* C. DC. det. M. Tebbes, 1987
 Small tree 5 m. tall. Spikes hanging.
- mo, , , , . 9180 *Guetarda chiriquiensis* Standl. det. J. Dwyer, 1975
 Shrub. Corolla white, fragrant.
- mo, 6. 9181 *Melastom. Topobea urophylla* Standl. vel sp. aff.
 Small tree. Petals in bud are pink.
 det. R. L. 1977

17PNV 948/534

9182-9183 along road, halfway between El Valle and La Mesa.
 alt. ca. ~~700~~ 700 m.

- mo, , . 9182 *Solanum americanum* Mill. ! D'Arcy 1974
 Roadside weed. Herb to 70 cm. Corolla white, fruit black.
- mo. 9183 *Pithecolobium*
 Small tree. Buds only.

Jan. 4, 1974

67

Prov. Coclé, Panamá

17PNV 965/546

9184-9187 Roadside at edge of tropical wet forest,
La Mesa, ca. 4 km. N of El Valle. alt. 875 m.

MO, .

9184 Melastom.

Shrub 3 m. tall. Petals white, filaments pink,
anthers yellow, style red at base, white at tip.

MO.

9185 Witheringia asterotricha (Standl.) Hunz. det. D'Arcy
1 m. tall. Leaf veins purple beneath. Corolla
yellow green with purple hairs on outside.

MO, , , , ,

9186 Lycianthes cf. multiflora Bitter det. M. Neo, 1997

Vine in roadside shrubs. Corolla white.

MO, , .

9187 Fern.

On fallen branch.

17PNV 972/540-1

9188-9201 Tropical wet forest, La Mesa, 4 km. N of El Valle.
alt. 850 m.

MO, 7.

9188 Aegiphila anomala Pittier det. R. Liesner, 1975
Small tree 7 m. tall. Leaves light beneath.
Fruit green.

9189-9201 Along rocky quebrada.

MO, , , .

9189 Melastom.

Shrub. Fruit white.

MO, , , .

9190 Gesner Drymonia rubra Morton det. ~~K. F.~~ Skog 1978

Epiphytic shrub. Corolla marked with brownish
purple, yellow area at base of "lip."
9191 moss Acroporium pungens (Hedw.) Broth.
on leaves of shrub.

MO,

Jan. 4, 1974

Prov. Coclé, Panamá

17PNV 972/540-541

- MO, , . 9192 Rub. Psychotria pilosa R. & P.
Slender shrub 2 m. tall. Fruit to 1 cm.
diam., blue, spongy-juicy, $\pm$ tasteless.
- MO. 9193 Cyperac. Mapania pycnophylla (Benth.) Benth.
- MO, , , . 9194 Gesner. Bestleria formicaria Nowicke det. L. E. Skog 1977
Shrublet 1-2 m. tall. Corolla white.
Fruit ca. 1 cm. diam., white, the brown
seeds arranged on the 4-lobed firm non-
sticky jellylike center.
- F, . 9195 hepat.
On damp rocks.
- MO, , . 9196 Melastom.
Slender shrub $1\frac{1}{2}$ m. tall, unbranched.
Fruit turning red.
- MO, , . 9197 Piper dryadum C. DC. ex char. det J. C.
Viny, to 3 m. Spikes erect, fragrant.
- MO, II. 9198 Melastom. Ossaea sp. suggestive of O. asplundii but external
calyx feathery longer (flowers needed). det. Wurdack 1976
Shrub 0.75 m. tall. Fruit reddish.
- MO, . 9199 Fern.
Epiphytic on shrub.
- MO, , . 9200 Piper aeguale Vahl det. J. Conrad 1975
Shrub 1 m. tall. Spikes green, erect.
- MO, , . 9201 Belaginelia articulata (Kunze) Spring
Terrestrial. On prop roots det. D. B. Kellinger 1977

17PNV 973/538

9202-9203 Damp open rocky pavement with peepage,
along road. La Mesa, 4 km. N of El Valle.
alt. 875 m.

Jan. 4, 1974

69

Prov. Coclé, Panamá

17PNV 973/538

MO.

9202 *Utricularia*

Flowers yellow.

MO,

9203 moss.

17PNV 972-977/537-541

9204-9216

Tropical wet forest and roadsides, La Mesa
4 km. N of El Valle. alt. 850-875 m.

MO,

9204 *Myrt.*?

Tree 7 m. tall. Cut twigs with neither
latex nor smell. Sterile.

MO, b.

9205 *Freziera calophylla* Triana & Planch.

Tree 8 m. tall. Flowers white, mostly still
in bud. det.

MO,

9206 ~~*Solanum hayesii* Fern.~~ *fosbergianum* D'Arcy. ^{det. D'Arcy 1974}

Shrub 3 m. tall. Corolla white, with
thick sweet odor.

MO.

9207. ~~*Anthurium*~~ ^{*A. hebetatum* Croat, det. Croat, 1981} *cinereopetiolatum* Croat. det. T. Croat 1979

Epiphytic vine. Cut petiole smells
like cucumbers.

Spathe green and purple, spadix green.

MO,

9208 *Polypodium subviride* Kellinger

Epiphytic vine. det. D.B. Kellinger 1977

MO,

9209 moss.

Fallen branch.

MO.

9210 fern. *Peltipteris peltata* f. *standleyi* (Maxon)

On fallen branch. det. D.B. Kellinger 1977

MO, f.

9211 *Flacourtia* ~~?~~ *Xylosma oligandrum* Donn. Sm.

± viney shrub to 3 m. Fruit green. ^{det. H. Steumer, 1976.}

Jan. 4, 1974

Prov. Coclé, Panamá

17PNV 972-977/537-541

MO, 8.

9212

Euphorb. Tetrorchidium euryphyllum Standl.
Tree 7 m. tall. Flowers yellowish green,
sweet smelling and attracting many
bees. det. Webster & Huft

MO, 13.

9213

HampeaTree 10 m. tall. Fruit brown, splitting
into 3 parts, aril white, seed black.

MO, , .

9214

Cordia eriostigma Pittier det. R. L. 1976Shrub 3 m. tall. Corolla white. Fruit
dull orange, juicy, ~~ca.~~ 1.5 cm. diam.

MO.

9215

Aral. Schefflera epiphytica A.C. Smith

Epiphytic vine(?). det. M. J. Cannon, 1983

MO, , , ,

9216

Rub.

Slender shrub 2 m. tall. Fruit green and
purple.

ca.

17PNV 947/532

MO, 11.

9217

ChamissoaVigorous vine to 2 m. in roadside shrubs.
Stem purple, inflorescence green. Road from
El Valle to La Mesa, NW ~~edge~~ of El Valle. alt. 650 m.17PNV^{ca.}

17PNV 947/515

9218-9219

El Valledo Antón

MO.

9218

Sapot. Pouteria fossicula Crong. det. T. D. PenningtonCult. tree 10 m. tall. "mamey" Fruit
eaten, gets larger than the one collected. alt. 600 m.

Jan. 4, 1974

Prov. Coclé, Panamá

17PNV 959/509

✓ MO, 7.

- 9219 *Erythrina berteroaana* Urban det. Kruckhoff 1976
Tree 7 m. tall, 40 cm. diam. at base.
Flowers bright red-orange. Young
fruit coiled, purple-green mottled. Seeds
bright red when ripe, white and about
twice as large in immature fruit. alt. 580 m.
- US. 9487 lichen on twigs of 9219.

17PNV 973-7/521-3

9220-9223 ["El Hato"], NE side of El Valle de Anton.
alt. ~~625 m~~ 640 m.

MO.

- 9220 Bignon. *Podranea ricasoliana* (Tanfani) Sprague
Cultivated vine. Corolla pink with darker
lines, sugary fragrant. det. A. Gentry, 1974

MO, 1, 7, 1, .

- 9221 *Solanum umbellatum* Mill. det. D'Arcy 1974
Shrub 2 m. tall on brushy roadside.
Corolla white, anthers yellow.

MO, MAD, 1, 1, 1, .

- 9222 *Solanum schlechtendalianum* Walp. det. D'Arcy 1974
MADw 32539. Shrub 2.5 m. tall.
Corolla greenish white. Brushy roadside.

MO, 6.

- 9223 Myrt. *Eugenia argyrea* ^{Hundell} _{10 cm. dbh} det. R.L.
Small tree 6 m. tall at edge of road
and disturbed woods. Flowers white.

ca. 17PPV 146/615

MO, 12.

- 9224 Leg. *Leucaena leucocephala* ssp. *glabrata* (Rose) Zarate
alt. 20 m.
Shrub 3 m. tall, open roadside along Pan-
Am. Hwy, 2 Km. SE of turnoff to Cerro Campana.

Jan. 6, 1974

Bar Canal Zone, Panama

17PPA 528-537/174-6

9225-9227, Secondary tropical moist forest along Boy
 9230, 9259 Scout Road, $1\frac{1}{2}$ km. SE of Madden Dam. alt. 90m.

MO, , , . 9225 Lycoseris latifolia (D. Don) Benth. ♀ det. R. L. 1976
 Vine to 5 m. in roadside thicket. Disc bright
 orange, odor not pleasant, something
 like urine.

MO, , , . 9226 Solanum rugosum Dun. det. D'Arcy 1974
 Small tree 7 m. tall, 7 cm. diam. Foliage
 foetid, corolla white, fruit green.

MO. 9227 Legum.
 Herbaceous vine. Petals purple with green lines
 on standard.

17PPA 518/172

MO, . 9228 Bignon.
 Woody vine to 12 m. in tree at edge of secondary
 tropical moist forest, $\frac{1}{2}$ km. S of Madden Dam.
 Fruit green. alt. 80 m.

ca. 17PPA 517/169

MO, 5. 9229 Convolv.
 Vine into tree and trailing over road,
 construction area, $1\frac{1}{2}$ km. S of Madden Dam.
 Flowers bright yellow. alt. 80 m.

17PPA 528-37/174-6

see top of page.

MO, 7. 9230 Bignon. Arrabidaea oxycarpa Urb.
 Vine in shrubs, fruit green. det. A. Gentry, 1974

MO, 5. 9239 Cassia biflora L.
 shrub 5 m. tall. det. R. Liesner, 197-

Jan. 7, 1974

Prov. Panamá, Panamá

17PPV609/931

MO, 7.

9231 Tabebuia guayacan (Seem.) Hemsl.

Cultivated tree 8 m. tall, 30 cm. dbh.
along Carretera Boyd-Roosevelt in
front of Universidad de Panamá, Panamá
City. Some branches nearly leafless. In
full flower (almost all fallen by Jan. 8),
the ground littered by fallen ones, odorless,
corolla lobes bright yellow, the tube a
duller, darker yellow.

alt. 20 m. det. A. Gentry, 1974

Jan. 8, 1974

Prov. Panamá, Panamá

9232-9237 Tropical moist forest area along El Llano - Carti road, 1.4 km. N of Pan Am Hwy at El Llano. alt. ca. ^{150 m.} ~~200 m.~~
Brushy second growth.

MO, 6.

9232 Heliocarpus

Tree 7 m. tall. Flowers greenish, anthers bright yellow.

MO, , .

9233 Guazuma ulmifolia Lam.

Tree 6 m. tall. Fruit green. det. R. Liemer, 1974.

MO, 10.

9234 Loranth. Phoradendron quadrangulare (HBK.) Griseb

Bushy parasitic shrub 1 m. tall on Guazuma # 9233. Fruit turning yellow, seed surrounded by sticky substance. det. J. Kuijt, 1974

MO, , , .

9235 Rub. Psychotria grandis Sw. det. J. Dwyer, 1975

Shrub 4 m. tall. Fruit green, turning red.

MO.

9236 Posoqueria

Shrub 3 m. tall. Fruit yellow, 3.5 cm. Seeds translucent, surrounded by orange pulp.

MO, , , .

9237 Comp. Neurolaena lobata (L.) R. Br. det. R. L. 1976

Shrub 2 m. tall. Disc yellow orange.

9238-9246 Disturbed tropical moist forest along El Llano - Carti road, 2.3 km. N of Pan Am Hwy at El Llano. alt. ca. 250 m.

MO, 5.

9238 Quassia amara

Common. Shrub 4 m. tall. Flowers pink. Fruit green, turning black, on red receptacle.

MO, 5.

9239 Sapot. Chrysophyllum panamense Pittier det. G. Pilz 1975

Shrub 5 m. tall with white latex. Fruit green.

Jan. 8, 1974

Prov. Panamá, Panamá

Ch. argenteum Jacq. ssp. panamense (Pittier) Penn.

MO, 9.

9240 Heisteria concinna Standl.

Either a woody vine or small tree with pendulous branches. Petals greenish white. Fruit pale yellowgreen, calyx turning red.

MO, , , .

9241 Olmedia aspera Ruiz + Pav.

Shrub. det. J. Conrad, 1975

MO, , , , .

9242 Faramaea

Shrub 2 m. tall. Fruit purple and green.

MO, .

9243 Paullinia

Woody vine in tree. Petals white, staminodes orange.

MO, 9.

9244 Acalypha macrostachya Jacq.

Shrub 4 m. tall. det. R. Liesner, 1975

MO, , , , .

9245 Polygonac. Coccoloba padiformis Meisn.

det. R. Liesner, 1974 Tree 12 m. tall with slightly fluted trunk. Sepals red, ovary and stamens white.

MO, 7.

9246 Burs.

Tree 10 m. tall. Fruits immature, green, with slightly sticky pap with light resinous odor. Seeds now green, surrounded by white aril.

9247-9258

Brushy second growth tropical moist forest along El Llano-Carriz road, 2 km. N of Pan Am Hwy at El Llano. alt. ca. 200 m.

MO, 5.

9247 Acalypha

Shrub 3 m. tall. Spikes green.

Jan. 8, 1974

9259 see p. 72

Prov. Panamá, Panamá

- MO, , . 9248 *Solanum ochraceo-ferrugineum* (Dun.) Fern. det. D'Arny, 1974.
Shrub 2.5 m. tall. Corolla white, anthers yellow.
- MO, , , . 9249 *Dalechampia tiliiifolia*
Common ^{herbaceous} vine. Bracts pale yellowish green
white in flower, gland yellow, sticky. Bracts
green in fruit.
- MO, , . 9250 *Dalechampia*
Herbaceous vine. Bracts white with
purple veins. Gland dark purple.
- MO, F. 9251 *Laciasis*
Scrambling to 2 m. Spikelets turning black.
- MO, , , . 9252 *Setaria*
Stamens orange.
- MO, , . 9253 Laurac. *Persea americana* Mill. det. H. v. d. Werff, 1982.
Tree 12 m. tall, 40 cm. dbh. Flowers greenish
yellow, staminodes yellow. Same tree (or one next to
it coll. in fruit sub # 10403
on March 5, 1974)
- MO, , . 9254 *Gouania*
Vine. Flowers with unpleasant odor.
- MO, MAD, 33. 9255 *Andira inermis* HBK. ! J. Dwyer
MADw 32540. Shrub 5 m. tall, 6.5 cm.
dbh. Fruit green.
- MO, F. 9256 *Lygodium venustum* Sw. ! D.B. Hellinger 1977
Vine.
- [9257 Gram.] lost! ? prob. *Opismenus*
- MO. 9258 *Mikania micrantha* HBK.
Roadside vine. det. R. L. 1976

Jan. 10, 1974

77

Prov. Panamá, Panamá

9260-9262 Weedy open roadside at Pan-Am. Hwy at
turnoff to El Llano-Carti road. 1 Km.
N of El Llano. alt. ca. 20 m.

MO.

9260 Comp Melampodium divaricatum (L.C. Rich.) DC.
Heads yellow. det. R.L. 1976

MO.

9261 Chamaesyce hysopifolia (L.) Small? det. R.L. 1976

MO.

9262 Amaranthus spinosus det. R.L.

Jan. 12, 1974

Canal Zone, Panamá

17PPA 489/024

MO, .

- 9263 Legum. Caesalpinia sappan L. det. R. Cowan, 1982.
 Spiny shrub 4 m. tall, cult. in Summit
 Garden. Fruit mostly green. alt. 80 m.
 Probably same shrub as collected Nov. 15, 1973 sub # 7985.

17PPA 420/085

MO, 4.

9264 Mabea

Slender shrub 4 m. tall, branches verticillate.
 Flowers red, fruit red and green. Edge of
 secondary tropical moist forest on road to
 Cerro Pelado radar station, 1/2 km. NW of
 Gamboa. alt. ca. 75 m.

17PPA 423/089

- 9265-9268 Secondary tropical moist forest, near summit
 of Cerro Pelado, 1 km. N of Gamboa. alt. 200-220 m.

MO, , .

- 9265 Passiflora vitifolia HBK. det. A. Gentry, 1975
 Woody vine high into tree, 2 cm. diam. at
 base. Flowers bright red, odorless, fruit green
 with white spots.

MO, 5.

- 9266 Hirtella racemosa Lam. det. R. Wiemer, 1975
 shrub 4 m. tall. Common. Flowers fragrant,
 petals pink, stamens and style darker at tip.

MO, 8.

- 9267 Laurac. Nectandra gentlei Lundell det. L.R. Holdridge 1977
N. cuspidata Nees, det. J. Rohwer, 1987 Shrub 4 m. tall. Fruit green.

MO.

- 9268 Hirtella racemosa Lam. det. R. Wiemer, 1975
 shrub 2 m. tall. Fruit dark purple.

Jan. 12, 1974

79

Canal Zone, Panamá

17 PPA 423/083

9269-9279 Secondary tropical moist forest at base of
Cerro Pelado, NW side of Gamboa. alt. 30-50m.

MO, , , .

9269 Rub.

Shrub 2 m. tall. Fruit with orange and
white stripes, the light brown seeds
surrounded by juicy brown pulp.

MO, , .

9270 Phyllanthus

Disturbed soil & along path in clearing.

9271-9279 Along small stream.

MO.

9271 Piper arieanum C. DC. (if distinct from P. trigonum)

Shrublet 1/2 m. tall. det. J. Conrad 1974

MO, , .

9272 Selaginella arthritica Alston det. D.B. Bellinger 1977

MO, , , .

9273 Witheringia solanacea L'Her. det. D'Arcy 1974

Shrub 1 m. tall. Petals yellow green,
fruit green.

MO, F.

9274 Piper

Shrub 2 m. Spikes hanging.

MO.

9275 Aristolochia pilosa HBK. det. R. Liesner, 1975

Herbaceous vine to 1 m. Flower green
and dark purple.

MO, F.

9276 Gram. Orthocladia laxa (L. Rich.) Beauv.

MO, , , , .

9277 Fern. Bolbitis portoricensis (Spreng.) Hennipm.

On rocks along stream. det. D.B. Bellinger 1977

MO, .

9278 Carludovica palmata R. & P. det. B. Hammel, 1973

Common. ^{Acaulescent} Petioles to 4 m. long. Inflorescence
yellowish white, from base.

MO, MAD, .

9279 Herrania purpurea (P.H.) R.E. Schultes det. K.B.

cauliflorous ~~un~~ unbranched shrub 4 m. tall,
MADw. 32541. 3.5 cm. diam. Flowers dark purple.

Jan. 13, 1974

Prov. ~~Panamá~~ Panamá, Panamá

9280-9324 Premontane wet forest area, 6.5 km. by road N of Lago Cerro Azul. alt. 650-730 m.

9280-9283 Coffee plantation with a few shade trees and remaining trees and shrubs.

MO, , , . 9280 Witheringia solanacea L'Her. det. D'Arcy 1974
1/2 m. tall. Corolla yellow, anthers white. Berries bright orange.

MO, 9. 9281 Coussapoua brevipes Pittier det. C.C. Berg, 1980
Epiphytic tree 6 m. tall, stems to 12 cm. diam., originally clasped to a tree (which has fallen and now rotting away) and now growing on ground, adventitious roots from lower stems. Sap clear.

MO, , , . 9282 ~~Eupatorium~~ Heterocondylus vitalba (DC.) King + Robins.
Vine in small tree. Heads very pale purple, almost odorless. det. R.L. 1976

MO, . 9283 Gesner. Episcia lilacina Hausskn. det. L. Skog, 1978
Creeping terrestrial. Corolla pale blue.

~~9284~~ 9284-9309 Somewhat disturbed forest remnant on slope.

MO, , , . 9284 Miconia
Vine in shrub. Fruit dark purple, ca. 1.2 cm. diam.

MO, MAD, . 9285 Razisea Odontonema tubaeformis (Bertol.) Kuntze
MAD w 32542. Shrub 2 m. tall. Flowers bright red, visited by hummingbirds. det. V.M. Baum, 1982

Jan. 13, 1974

81

Prov. Panamá, Panamá

det. R.S. Cowan 1980.

- MO, 8. 9286 Legum. Macrolobium costaricensis W. Burger
Sprouts 7 m. tall from 35 cm. diam. base.
Young leaves bronze. Flowers fragrant,
petal white, filaments pale reddish.
- MO, , , . 9287 Myrsin. Auricularia glandulosomarginata
(Benth.) Lundell
Tree 10 m. tall, 20 cm. dbh. Fruit green
with dark dots. det. Lundell, 1984
- MO, 7. 9288 Bomarea allenii Killip det. R. Gereau, 1984
Vine to 8 m. Flowers hanging, ^{odorless,} 8 main
branches to umbel, tepals pink with dark
purple brown spots, green at tip.
- MO, . 9289 Hippocr. & Salacia gigantea Loes. det. A. Gentry,
Woody vine to 8 m. in small tree, 2.5 cm. ¹⁹⁷⁵
diam. at base. Only one flower seen, on
pedicel (lost) about 5 cm. long, odorless,
petals dull, greenish at tip, grading to brownish
purple at base, stigma orange.
- MO, 8. 9290 Cratogeomys amplifolia Triana & Planch.
Slender shrub 5 m. tall, 3 cm. dbh. Petals
light yellow green, ~~stamens~~ stamens dull
orange, odorless. Fruit purple, on red stipes.
- MO, MAD, , , , . 9291 Acanth. Aphelandra gracilis Leonard
MADw 32543. Shrub 4 m. tall. Corolla
dark pink. det. L. McDade, 1980
- MO, MAD, . 9292 Viol. Hybanthus jefensis Todzia, paratype.
MADw 32544. Shrublet 1 m. tall. Petal white.
- MO, , . 9293 Piper hispidum Sw. det. J.C. ~~E~~
Shrub 3 m. tall. Spikes erect.

Jan. 13, 1974

Prov. Panamá, Panamá

- MO, , . 9294 *Erythroxylon* ^{cf.} *panamense* Turcz. det. T. Plowman, 1983
Shrub 4 m. tall. Flowers greenish white, mostly buds.
- MO, , , . 9295 *Gram.*
- MO, 8. 9296 *Piper*
Shrub 2 m. tall. Spikes erect.
- MO, , , . 9297 *Rub.*
Shrub 5 m. tall. Whole flower white, beautifully fragrant.
- MO. 9298 *Peperomia* sp. not matched at MO. *P. cochleana* Tral.
on fallen branch. det. R.G. 1976 det. M. Grajales, 1984
- MO, , , . 9299 *Zamia fairchildiana* L.O. Gomez, det. Gomez, 1982
Young plant with stem 15 cm. tall, 4 cm. diam.
Occasional, ~~no~~ no really large ones seen.
Cut stem exuding clear brown jelly.
- MO, 5. 9300 *Pavonia dasy petals*
Shrub ~~5~~ 5 m. tall, 6 cm. diam., edge of forest.
Petals pink.
- MO, 9. 9301 *Rub.*
Small tree 6 m. tall, 7 cm. dbh. Trunk with conspicuous rings 5-15 cm. apart.
- MO, , . 9302? *Psychotria*
Shrub 1 m. tall. Fruit bright orange.
- MO, 9325 moss. *Rhacopilopsis trinitensis* (C. Mull.) Brit. H.
Covering buttress of fallen tree.
- MO, . 9303?
Apparently a common tree. Flowers only collected, abundantly littering the ground, greenish.

Jan. 13, 1974

Prov. Panamá, Panamá

MO, .

9304 ³*Landia armata* (Sw.) DC.

Shrub 2 m. tall. J. Dwyer, 1983.

MO.

9305 *Guarea guidonia* (L.) Sleumer det. T. Pennington
Slender shrub 3 m. tall. Single fruit reddish.

MO, .

9306 Rub. *Psychotria officinalis* L.

Shrub 2.5 m. tall. Fruit green. det. J. Dwyer, 1975

MO, , , .

9307 Rub.

Shrublet 1 m. tall. Fruit blue, spongy juicy.

MO, , , , ,

9308 Rub.

Shrub 5 m. tall, 6 cm. diam. with stringy brown bark. Fruit green.

MO, , , , .

9309 *Solanum hayesii* Fern. s. aff. *hayesii* Fern. det. D'Arcy 1974

Shrub 6 m. tall, 10 cm. diam. Trunk with some spines, flowers with thick sweet odor, corolla white.

9310-9318 open brushy weedy area recently cleared of forest.

MO, , , .

9310 *Vernonia canescens* HBK. det. R.L. 1976

Viny shrub to 3 m. Flowers white.

MO, , , .

9311 *Journefortia bicolor* Sw. det. R. Liesner 1975Viny shrub 1.5 m. tall. ~~in~~ Corolla white.

MO, , , , ,

9312 *Solanum ochraceoferrugineum* (Dun.) Fern. det. D'Arcy 1974

Shrub 2 m. tall. Corolla white.

MO, 6.

9313 Comp. *Spilanthes alba* L'Her. det. R.L. 1976

Herb. Rays pale yellow.

MO, 6.

9314 Comp. *Neurolaena lobata* (L.) R.Br. ! R.L. 1976

2 m. tall. Disc orange.

Jan. 13, 1974

Prov. Panamá, Panamá

probably all ended up at WIS #9315

- M. ~~MO~~, , , . 9315 *Solanum hayesii* Fern. S. aff. *hispidum* Pers.
det. D'Arcy 1974
Sterile sapling 2 m. tall. Juvenile leaves.
- M. MO, , , . 9316 *Phytolacca rivinoides* Kunth + Bouché
Robust subshrub 1.5 m. tall. Flowers pink.
Pedicels & rachis purple, fruit green. det. R. Liesner, 1975
- M. MO, , , . 9317 *Solanum asperum* L.C. Rich. det. D'Arcy 1974
Foetid shrub 2 m. tall. Corolla white.
- MO, , , , . 9318 *Solanum asperum* L.C. Rich. ! D'Arcy 1974
Shrub 4 m. tall. Corolla white, fruit green.
- M. 9319-9324 Coffee plantation.
- MO, , , . 9319 *Ageratum houstonianum* Mill. det. R. L. 1976
Flowers blue.
- M. MO, 4. 9320 ~~Balsamin.~~ *Impatiens wallerana* J.D. Hook. vel sp. aff.
Succulent herb. Flowers red-orange. det. R. Liesner, 1976
- MO, 8. 9321 *Bram. Oplismenus*
Stigmas red.
- M. MO, , , . 9322 *Siparuna patelliformis* Berk. det. J.H. 1975
Shrub 2 m. tall with lemony odor. Flowers yellow.
- M. MO, , , , . 9323 *Siparuna patelliformis* Berk. det. J.H. 1975
Shrub 3 m. tall. with lemony odor. Fruit red,
to 2 cm. diam., depressed globose, yellow
around the apical conical hole.
- M. MO, , , , . 9324 *Pera arborea* Mutis
Tree 7 m. tall, 20 cm. dbh. Fruit green.

Jan 16, 1974

Prov. Panamá, Panamá

9326-9334 Premontane wet forest, El Llano-Carti road,
5 Km. N of Pan-Am. Hwy at El Llano.
alt. ca. 300 m.

- MO, . 9326 Passiflora vitifolia HBK. det. A. Gentry, 1975
Vine in shrubs ~~at~~ along road. Flowers bright red.
- MO, , , , 9327 bent. Lisianthus skinneri (Hemsl.) Kuntze
det. R. Willson, 1993 shrubs to 1.5 m. tall, brushy area at edge of
forest. Corolla yellow with greenish lobes.
- MO, , , . 9328 Piper sp. nov.? too immature. see Kirkbride 1953.
Shrub 5 m. tall. Spikes immature.
- MO, MAD, , , , 9329 ^{close to} Witheringia solanacea L'Her. det. W.G.D'Arcy 1974
MADw 32545. Shrub 3.5 m. tall. Petals recurved,
greenish yellow, anthers white.
- MO, . 9330 Arac. Heteropsis oblongifolia Kunth det. T. Croat, 1975
"Woody" vine at 3 m. on large tree. Spathe and
spadix light green. Vine partly free, lower
part of stem appressed to tree by roots.
- MO, 8. 9331 Piper pseudogargaranum Trel. det. J. Conrad, 1975
Shrub 1 m. tall. Spikes erect.
- MO, 6. 9332 Smilax panamensis Morong det. R. Liesner, 1975
Slender woody vine. Stigmas white,
young fruit green.
- MO, 6. 9333 Dillen. Doliocarpus
Woody vine with flaky brown bark, in
small trees at edge of clearing. Branches
of inflorescence red, young fruit green.

Jan. 16, 1974

Prov. Panamá, Panamá

- M MO, MAD, 15. 9334 Laur. *Phoebe neurophylla* Mez & Pittier det. L. R. Holdridge 1977
MADw 32546. Slender tree 10 m. tall, 10 cm. dbh. Inflorescence green, flowers not open.
-
- M 9335-9336 Pre-montane wet forest, El Llano - Carti road, ca. 14 km. N of Pan. Am. Hwy. at El Llano. alt. ca. 450 m.
- M MO. 9335 *Mapania assimilis* Koyama det. J. Davidse, 1975
M MO, MAD, 13. 9336 *Siparuna cuspidata* (Tul.) A. DC. det. S. Renner, 1986
MADw 32547. Shrub 4 m. tall, 3 cm. diam. Crushed leaves with weak, ± unpleasant odor.
-
- M 9337-9338 Pre-montane wet forest, El Llano - Carti road, 16 km. N of Pan. - Am. Hwy. at El Llano. alt. 400 - 450 m.
- M MO, . 9337 Cyperac. *Rhynchospora argentea* Standl. on stilt roots. Flowers white.
- MO, . 9338 Hymenophyll. *Trichomanes membranaceum* L. det. D. B. Keatinger 1977
Vine appressed to trunk of small shrub.
- M MO, MAD, , , 9339 Rub. *Gonzalagunia bracteosa* (Donn. Sm.) Rob. det. J. Dwyer
MADw 32548. Slender shrub 3 m. tall. Inflorescence hanging, young fruit green.
- M , , , , . 9340 ^{Synonym} *Witheringia exiguiiflora* D'Arcy Ann. Mo. Bot. Gard. 63: 366
M MO, MAD, , , MADw 32549. Shrub 1.5 m. tall, along small creek. Flowers and fruit hanging. Corolla pale yellow, accrescent calyx
- = *Cuscuta*
exiguiflora
D'Arcy Hunt.

Jan. 16, 1974

Prov. Panamá, Panamá

- MO, , . 9341 warty, green. Fruit and seeds (probably immature) white. = *Cuatteria exigua* (D'Arcy) A.T. Hunz. Rub. *Hoffmannia woodsonii* Standl. det. J. Dwyer, 1975. Shrub 2 m. tall along small creek. Fruit red.
- MO, MAD, . 9342 ? ~~Solanum~~ *Lycianthes amatlanensis* (Coul.) D. Sm. det. D'Arcy 1974. MADw 32550. Slender shrub 1.5 m. tall, along small creek. Leaf veins purple beneath. ~~Calyx~~ Corolla lobes 6.5 x 2.5 mm., yellowish at base, whitish at tips, anthers yellow-orange.
- MO. 9343 *Psychotria* Shrublet 1/2 m. tall. Fruit bright red.
- MO, , . 9344 Gesner. *Monopyle "macrophylla" macrocarpa* Benth. det. L.E. Skog 1978. Disturbed clay at edge of forest. Corolla white, within the floor of tube yellow, the roof with purple spots near the anthers.
- F, , , . 9345 *hepat.* Covering fallen log.
- MO, MAD, . 9346 *Siparuna pauciflora* (Benth.) A. DC. det. Humbles. MADw 32551. Slender shrub 4 m. tall, crushed leaves with pleasant lemony scent. Fruit globose, ^{the largest 1.6 cm. diam.} red with white spots, small conical depression at tip.
- MO, . 9347 Rub. *Psychotria orchidearum* det. J. Dwyer 1975. Small epiphytic shrub. Corolla white with reddish tinge to lobes.
- MO. 9348 *Piper*
- MO. 9349 Piperac. *Peperomia pernambucensis* Mig. det. R.L. 1976.

Jan. 16, 1974

Prov. Panamá, Panamá

det. L. Durkee, 1982

- MO. 9350 Acanth. Aphelandra gracilis x A. sinclairiana
Vine on ground (?). Flowers dark pink.
- MO, , , . 9351 Melastom. Henrietella tuberculosa D.Sm. det. R.L. 1975
Shrub 7 m. tall. Flowers white.
- MO, 8. 9352 Guttif. Tovomitopsis nicaraguensis Pl. & Tr. det. R. Liem, 1983.
Tree 10 m. tall, 12 cm. dbh, inner bark and wood red, scant sticky latex in twigs but none in trunk. Buds greenish white and pink, petals white, stamens (?) yellow, most flowers have turned brown.
- MO, . 9353 Besner. Columnnea florida Morton det. L.E. Skog, 1977
Vine on trunk of small tree. Leaf spots red. Calyx yellow-green, soft fuzzy.
- MO. 9354 Cyclanth.
Terrestrial, on stilt roots. Peduncle purple.
- MO, . 9355 Paradrymonia decurrens (Morton) Wiehl. det. L.E. Skog, 1978
Vinelet at 1.5 m. from ground on trunk of small tree.
- MO. 9356 Faramea
Slender shrub 3 m. tall. Fruit green.
- MO, , , , , . 9357 Triplaris
Terrestrial or epiphytic at base of shrubs. Flowers white.
- MO, . 9358? Diatoma Monolena dressleri ined. det. L. Warner, 1980.
Terrestrial. Petals white with rose tinge. Leaves purple beneath.
- MO, . 9359 Calathea aff. lasigstachya Donn. Sm.
Herb 1.5 m. tall. Bracts yellow green.
det. H. Kennedy, 1975

Jan. 16, 1974

[9362 Bauhinia petiolata (Mutis) Triana
det. R. Wunderlin 1978]

89

Prov. Panamá, Panamá

- MO. 9360 Scaphyglottis
Epiphyte. Flowers odorless, very pale
purplish yellow.
- MO, . 9361 Piper exiguicaule Yuncles det. J. Conrad, 1975
1976 new to Panamá
- MO, . 9362 Bauhinia beuginotii Cufod. Wunderlin Ann. Mo Bot. Gard
63, 350
Sprawling shrub 1 m. tall. ~~Petals white,~~
Flowers white, claw pale pink, anthers yellow.
- MO, 5. 9363 Anaxagorea allenii R. E. Fr. det. R. Liesner, 197-
Tree. Single flower brownish. Fruit
green, splitting during drying.

9364-9386 Premontane wet forest, El Llano - Carti road
12 km. N of Pan-Am Hwy. at El Llano.
alt ca. 400 m.

- MO. 9364 Peperomia panamensis C. DC. det. R. L. 1976
Canopy epiphyte.
- MO. 9365 Eric. Spherospermum cordifolium Benth. det. R. W. Bur
1989
Small shrub, canopy epiphyte.
- MO, , , . 9366 fern. Diplazium macrophyllum Desv. det. D. B. Lellinger
1977
Acaulescent, along stream. Petiole 80 cm.
long, blade 130 cm. long.
- MO, . 9367 Piper sp. nov. (same as Croat 23004, 25630, 27617, 14775),
det. J. C. 1975
Shrub 1½ m. tall. Spikes erect. Gentry 3642
- MO, 15. 9368 Morac. Persea guianensis ssp. castilloides (Pittier)
C. C. Berg
Tree 7 cm. dbh, 7 m. tall with annonaceous
branching, sap pale yellow, sticky. Along
stream. det. C. C. Berg, 1987

Jan. 16, 1974

Prov. Panamá, Panamá

- MO, , , , 9369 Polypod. Grammitis cultrata (Willd.) Proctor det. H. v. d. Werff, 1982
det. D.B. Zelling 1977
Dangling epiphyte on tree trunk.
- MO. 9370 Cyclanth.
On rocks along stream. Flowers white.
- MO, , . 9371 Guttif. Tovomitopsis glauca Pl. & Tr. det. D'Arcy,
Slender shrub 2.5 m. tall along stream. 1980.
Petals white, stamens yellowish.
- MO, , , . 9372 Piper
Shrub 2 m. tall along stream, leaning.
Spikes young, erect.
- MO, . 9373 Melastom.
Shrub 2 m. tall. Fruit green.
- MO, b. 9374 Guttif. Tovomitopsis glauca Oerst. det. R. L. 1975.
Shrub 4 m. tall. Petals white, young fruit green.
- MO, 9375 moss.
On upper twigs of # 9374.
- MO, f. 9376 Siparuna nicaraguensis Hemsl. det. Humbles
Shrub 3 m. tall, arching over stream.
Rim of flower turning orange.
- MO, . 9377 Guttif. Tovomitopsis glauca Oerst.? det. R. Liesner, 1975
Slender shrub 3 m. tall. Fruit red and pale green, to 2.5 cm. diam., with clear sticky sap.
Seeds with yellowish sap, surrounded by bright orange aril. (fruits probably immature)
- MO, MAD, , . 9378 Apoc. Bonaniafusia undulata (Vahl) A. DC.
MADW 32552. Shrub 3 m. tall with white latex.
Leaves dark green above, pale green below.
det. A. Gentry, 1974

Jan. 16, 1974

Prov. Panamá, Panamá

MO, F, , .

9379 Ichnosiphon inflatus Andersson
Branched herb 3 m. tall. det. L. Andersson,
1982

MO, F.

9380 PetreaHigh climbing woody vine. Calyx blue,
corolla darker, purple, with white at throat.

MO, , .

9381 Witheringia aff. correana D'ArcySub shrub 1/2 m. tall, weedy edge of forest.
Corolla pale yellow, stamens yellowish, fruit
green. det. W. G. D'Arcy, 1991

MO.

9382 Rub. AlibertiaShrub 2 m. tall. Fruit apparently rotting,
dark purple with yellowish white seeds in
rotten pulp.

MO, .

9383 orchid.

~~Canopy ep~~ Pile of limbs, probably originally a
canopy epiphyte. Flowers odorless, petals red,
calyx yellow.

MO.

9384 Bromel. Catopsis morreniana Mez

Canopy epiphyte. Green. det. M. H. H. T., 1989

MO, , .

9385 Besner. Columnnea zebrina Raymond det. L. E. Skog
(1977)In pile of limbs, probably originally a canopy
epiphyte. Flowers odorless, corolla yellow
with very dark purple (appearing black)
stripes.

MO, .

9386 Anthurium coclense det. T. Croat 1979Short vine on rocks. Spathe and spadix
green.

Jan. 18, 1974

Canal Zone, Panamá

17PPA 478-480/023-024

9387-9391

Along RR, 1/2 km. W of Summit Gardens.
alt. 80 m.

MO, 35.

9387 Cyper. Eleocharis minima Kunth det. J. G. Davidson 1995
Dense patches in open, now dry ditch.
Collected before sub *7823, Nov. 5, 1973.

MO, , , , .

9388 Scroph.Open, now dry ditch. Corolla white with yellow
area in throat.

MO.

9389 CoutoubeaGrassy area dominated by Hyparrhenia
rufa. Corolla white.

MO.

9390 Scroph. Lindernia crustacea (L.) F. Muell. det. J. H. 1974

Open gravelly, now dry ditch. Corolla blue and white.

MO, MAD, 25.

9391 Comp. Chromolaena odorata (L.) King & Robinson.MADw 32553. Shrub 2 m. tall. Flowers
odorless, very pale blue, appearing white.
det. R. L. 1976.

17PPA 473/032

MO, , , .

9392 Verb. Trichanthera gigantea (Bonpl.) NeesShrub 6 m. tall with several stems, to 10 cm.
diam., prop roots at base. Flowers yellow and
orange. Edge of secondary tropical moist forest
along Gaillard Hwy., 1 1/2 km. NW of Summit
Garden. alt. 75 m.

17PPA 479-484/033-036

9393-9397

secondary tropical moist forest along road to
Semaphore Hill radar station, 1 km. NW of Summit
Gardens. alt. 125-200 m.

Jan. 18, 1974

Canal Zone, Panamá

17PPA 479-484/033-36

- MO. 9393 *Bignonia martinella obovata* (HBK.) Bur. & R. Schum.
Vine in canopy of tree along road. Fruit brown,
seeds pale green. det. R. A. Gentry
- MO. 9394 *Clitoria*
Woody vine into canopy, leaves
unobtainable. Flowers in small clusters
at 3 m. from ground on bare 3 cm. diam.,
± smooth stem with brown bark. Flowers
pink and white.
- MO, , , , . 9395 *Solanum schlechtendalianum* Walp. det. D'Arcy 1974
Shrub 4 m. tall at edge of forest, foetid.
Flowers hanging, fruit green, upright.
- MO, , , . 9396 *Herrania purpurea* (Pittier) R. E. Schult.
"Tree" 6 m. tall, 6 cm. diam. at base,
unbranched, tapering to cluster of leaves
at top. Flowers in small clusters on stem
from ^{near} top to ground level, mostly buds,
rich red purple in bud.
- MO, 24. 9397 *Inga*
Tree 8 m. tall. Flowers lightly fragrant,
fully expanded (6:00 PM). Calyx and
corolla green, filaments and style white.

Jan. 19, 1974

Canal Zone, Panama

17 PPA 429-434/095-101

9398-9415

Secondary tropical moist forest, much of it with *Heliconia mariae* thickets and *Gustavia puerba*. 1.5-2 km. N of Gamboa. alt. 35-50 m.

MO, , .

9398 *Heliconia wagnerianum* Peters.

Herbs to 3 m. tall. Petioles to ca 1 m. long, blade to ca. 2 m. long. Inflorescence erect, bracts distichous, filled with water, yellow, green and red. Flowers green. ! L Andersson, 1982 in litt.

MO, , , .

9399 *Amaranth.*

Scrambling herb to 2 m.

MO, MAD, 14.

9400 *Aphelandra pinclairiana* Nees

MADw 32554. Shrub 4 m. tall. Bracts orange, corolla dark pink.

MO, 15.

9401 *Gram. Orthocladia laxa*

MO, 4.

9402 *Gram.*

Stigma white.

MO, , .

9403 *Clitoria*

Woody vine 3 cm. diam at base, bark smooth, going into canopy of ^{15 m. tall} tree, leaves not obtainable. Flowers in small clusters from stem, from ground to high up on stem, pink & white.

[9404 * number skipped.]

MO, 6.

9405 *Salvinia minima* Baker det. D. B. Lellinger 1977

Floating in quiet water of marsh along Quebrada San Antonio, ± an arm of Chagres River. Shaded by *Coroza oleifera*

MO, , .

9406 ? *Myrsin.*

Shrub 3 m. tall at edge of swamp. Inflorescence white, flowers odorless.

Jan. 19, 1974

Canal Zone, Panama

17 PPA 429-434/095-101

- MO, 4. 9407 Siparuna pauciflora (Beurl.) A. DC. det. Humbles
Shrub 4 m. tall with arching branches.
"Flower" turning orange. ! S. Renner, 1996
- MO, 11. 9408 Dorstenia contrajerva L.
Inflorescence green.
- MO. 9409 ?
Shrublet 1/2 m. tall. Fruit to 7 mm. diam.,
dark purple, the inside spongy juicy, pale
purple, almost white.
- MO, . 9410 Poulsenia armata (Mig.) Standl. ! Conrad
Young tree 5 m. tall, 6 cm. diam.,
trunk spiny nearly to base, with
copious thin, milky sap.
- MO. 9411 Gram. Pharus latifolius L.
Forming clumps on stilt roots.
- MO, , , . 9412 Hyptis
Along path. Corolla white with purple spots.
- MO, 14. 9413 Cynoctonum mitreola (L.) Britton
Herb to 1 m. Common in places along
path. det. R. Liesner, 1975
- MO, 14. 9414 Piper
Bushy shrubs 1 m. tall. Petioles reddish.
- MO, 5. 9415 Piper
Shrub 1.5 m. tall.

Jan. 20, 1974

Canal Zone, Panamá

17PPA 475/031

MO, 6.

9416

Coccoloba

Shrub 4 m. tall with several stems, leaning out over Río Masambi Grande, secondary tropical moist forest ^{near} Gaillard Hwy, 1½ Km. NW of Summit Garden. alt. 75 m.

17PPA 477-486 / 037-047

9417-9425 Secondary tropical moist forest along Río Masambi Grande. alt. 80-100 m. 1-2 Km. upstream from Gaillard Hwy. 2 Km. N of Summit Garden.

MO, MAD, 34 .

9417

Macrocnemum glabrescens (Benth.) Wedd.

MADw 32555. Tree 12 m. tall, 15 cm. "dbh" with deeply fluted trunk with brown bark. Flowers odorless, corolla pink in bud, darker pink when open. det. M. G. L. J. Dwyer, 1974

MO, .

9418

fern. Dicranoglossum panamense (C. Chr.) Gómez

Epiphyte on twigs. det. D. B. Kellinger 1977

MO, .

9419

Rub. Psychotria psychotriifolia (Seem.) Standl.

Shrub 1 m. tall on gravelly stream bed. Flower light green. det. J. Dwyer, 1975

MO, .

9420

Pseudobombax septenatum (Jacq.) Dugand

Large leafless tree ca. 1 m. dbh, slightly narrowed toward base with small buttresses 1 m. high, green striped. Flowers falling, filaments white when fresh.

MO, .

9421

moss. Callicostella pallida (Hornsch.) Jaeg.

covering fallen log. det. D. B. Kellinger 1977

MO, .

9422

Polypodium Campyloneurum oculatum (Christ) Gómez

Common on one side of trunk of Scheelea

Jan. 20, 1974

97

Canal Zone, Panamá

17PPA 477-86/037-47

zonensis from 2 m. above ground to base of
Crown at 10 m. Dry and wilted.

MO, 13.

9423 ~~?~~ *Picramnia*

Shrub 4 m. tall leaning over stream.

Inflorescence hanging, odorless, green.

MO, MAD, 41.

9424 ~~Cassia~~ *Guarea guidonia* (L.) Steumer ^{det. T. D. Pennington 1979}
MADw 32556. Shrub 7 m. tall, 7 cm. diam.

Fruit green, becoming brown roughened.

MO, MAD, 23.

9425 Myrt. *Eugenia perstedeana* Berg det. R. L.

MADw 32557. Shrub 6 m. tall, 7 cm. diam.

Crushed foliage only faintly aromatic.

Fruit green.

Jan. 23, 1974

Canal Zone, Panama

17 PPV 569/932

9426-9428

Grassy roadside, Gaillard Hwy. at Corozal.
alt. 5 m.

MO.

9426

Cenchrus

MO.

9427

Chamaesyce hypericifolia (L.) Millsp.
det. R. L. 1976

MO.

9428

Comp. Vernonia cinerea (L.) Less.
det. R. L. 1976

Jan. 24, 1974

99

Canal Zone, Panamá

17PPA 473/027

MO, 10.

9429 *Salvia hyptoides* Mart. & Gal.

Edge of gravel and *Panicum maximum* thickets along RR, 1 km. NW of Summit Gardens. alt. 75 m. Common, in places abundant, along RR gravel at edge of grass between Summit Garden and Gamboa. Corolla blue and white.

17PPA 469/035

9430-9431 Along RR, 2 km. NW of Summit Gardens. alt. 80 m.

MO.

9430 *Comp. Fleischmannia sinclairii* (Benth.) K. & R.

RR gravel. Heads blue. det. R. Liesner 1976

MO, .

9431 Rub. *Oldenlandia corymbosa* L. det. J. Dwyer 1974
Edge of ditch and *Panicum maximum* thickets.

17PPA 457/046

9432-9433 Along RR, 4 km SE of Gamboa bridge, alt. 65 m.

MO, , .

9432 *Poinsettia heterophylla* (L.) Kl. & Gke.

RR gravel.

MO, .

9433 *Mesechites trifida* (Jacq.) Müll. Arg.

Vine at edge of RR. gravel and *Panicum maximum*. Flowers fragrant (11:00 A.M.). Corolla tube pink below constriction, green above, lobes very pale green. Sap milky.

17PPA 452/052

MO, , .

9434 Rub. *Oldenlandia corymbosa* L. det. J. Dwyer 1974

Gravel along RR, 3 km. SE of bridge at Gamboa. Corolla pale blue. alt. 65 m.

17PPA 449/058

MO, 15.

9435 *Ficus insipida* Willd. det. Conrad

Tree 1 m. dbh., 12 m. tall, buttresses to 1.5 m, copious milky sap. Secondary tropical moist forest at

Jan. 24, 1974

Canal Zone, Panama

17PPA 449/058

edge of Gaillard Hwy., 3 km. SE of Gamboa.
Figs green with lighter green spots. alt. 50 m.

17PPA 448/068

MO, 14.

9436

Inga

Small tree 8 m. tall, 10 cm. dbh. along Gaillard Hwy., 2 km. SE of Gamboa at edge of secondary tropical moist forest. alt. 60 m. Fruit twisted, green with rather stiff fuzzy light brown hairs. This tree collected in flower Oct. 8, 1973 sub # 7306.

17PPA 475/029

MO, 11.

9437

Cassia fagera L.

det. R. Liesner, 1975

Prostrate on closely mowed lawnlike grassy roadside, Gaillard Hwy. 1 km. NW of Summit Garden. Flowers orange. alt. 75 m.

17PPA 476/032

MO, MAD, 73.

9438

Adelia triloba (Munell. Arg.) Hemsl.

MADw 32558. Shrub 6 m. tall, 6 cm. diam.

Brushy edge of secondary tropical moist forest at radar road bridge over Río Masambi Grande, 1½ km. NW of Summit Gardens. alt. 75 m. Many branches spinescent, also some short spinescent shoots on the trunk. Fruit green, splitting during drying.

Jan. 25, 1974

Canal Zone, Panamá

17 PPA 413-415/081

9439-9444 Brushy edge of pond and roadside, 1 km. w
of Gamboa. alt. 30 m.

MO, 10.

9439 Legum.

Herbaceous vine. Flowers yellow.

MO, 40.

9440 *Casearia arguta* HBK. ! R.L.Shrub 4 m. tall. Flowers pale greenish, with
strong sweet odor.

MO, , , .

9441 Asclep.

Tangled vine to 7 m. Sap milky. Flowers
white, odorless.

MO, .

9442 Convolv. *Ipomoea indica* (Burm.f.) Merrill

Vine. Flowers purple. det. P. Hammel, 1974

MO, 12.

9443 ~~Senjaia~~ *Senjania*Vine. Fruit green, becoming strongly tinged
with red.

MO, 8.

9444 Sapind.

Vine. Flowers white, staminodes yellow.

17 PPA 418/080

9445-9446 Along RR and Dredging Division, 1/2 km. W of
Gamboa. alt. 30 m.

MO, 6.

9445 *Mesechites trifida* (Jacq.) Müll.-Arg.Vine trailing on gravel along RR. Sap milky.
Flowers odorless (6:00 PM). Corolla tube pink
below constriction, green above, ends of lobes
nearly white.

Jan. 25, 1974

Canal Zone, Panama

17PPA 418/080

MO, 18.

9446 Mesochites trifida (Jacq.) Müll.-Arg.

Vine on chain link fence between Dredging Division and RR. Sap milky. Flowers odorless (6:00 P.M.). Corolla tube pink below constriction, green above, lobes green at base, white toward tip. Fruit green or purple brown.

Jan. 26, 1974

103

Canal Zone, Panamá

17 PPA 428-432/100-114

9447-9467

Tropical moist forest, mostly secondary with much *Gustavia superba*. Along Quebrada San Antonio, 2-3 1/2 km. N of Gamboa, alt. 30-200 m.

MO, .

9447

Sapind.

Slender woody vine into canopy. Leaves from a sprout, possibly from the same rootstock. Fruit green, turning red, on bare stem at 1-4 m. from ground.

MO, 10.

9448

Cestrum reflexum Sendt. det. D'Arcy 1974

Tangled robust woody vine covering shrubs & opening, stems ca. 4 cm. diam. at base. Approaching in habit a weak shrub with scrambling branches. Flowers with faint sweet odor (11:00 AM), this becoming stronger after picked and in plastic bag for several hours. Corolla yellowish green, stigma green. Fruit to 1.3 x 0.8 cm., turning purple.

MO, 13.

9449

Myrt.

Shrub 4 m. tall. Fruit green, turning purple.

MO, , .

9450

Anthurium baileyi Standl. ?

Terrestrial on short caudex with prop roots. Spathe green. Spadix yellow green or yellow when immature, green with purple fruit when ripe.

MO, , .

9451

Hieronyma laxiflora (Tul.) Muell.-Arg. det. R.G. 1976

Tree 20 m. tall, 75 cm. dbh. Fruit turning light then dark purple, juicy. Many fruiting twigs fallen to ground.

Jan. 26, 1974

Canal Zone, Panamá

17PPA 428-432/100-114

- MO, 10. 9452 *Hieronyma laxiflora* (Tul.) Muell. - Arg. det. R. G. 1976
Large tree. Fruit green, then turning dark purple, juicy. Many fruiting twigs fallen to ground.
- MO, 5. 9453 *Peperomia glabella* (Sw.) A. Dietr. det. R. G. 1976
Epiphyte on log fallen across stream.
- MO, . 9454 fern. *Dicranoglossum panamense* (C. Chr.) Gómez
Canopy epiphyte. det. D. B. Lellinger 1977.
- MO, 6. 9455 fern. *Diplazium grandifolium* Sw. det. D. B. Lellinger 1977
Terrestrial along creek bank. With short caudex.
- MO, , , . 9456 *Asplenium laetum* Sw. det. D. B. Lellinger 1977
On rocks along stream.
- MO, 6. 9457 *Lectaria draconoptera* (D. C. Eaton) Copel. det. D. B. Lellinger 1977
Petiole to 65 cm long, blade to 85 cm long.
- MO, 5. 9458 fern. *Diplazium cristatum* (Desr.) Alston det. D. B. Lellinger 1977
D. arifolium (Willd.) Presl det. A. Seem, 1984
- MO, . 9459 fern. *Bolbitis portoricensis* (Spreng.) Henning
On humus covered rock. Fronds dimorphic.
- MO, 4. 9460 Gesner. *Besleria laxiflora* Benth. det. L. E. Skog, 1977
Shrub 1½ m. tall. Corolla dark orange, fruit green.
- MO. 9461 fern. *Asplenium rutaceum* (Willd.) Mett.
damp cliff. det. R. G. Stolze 1977
- MO, . 9462 *Selaginella mollis* A. Braun *S. novae-hollandiae* (Sw.) Spring
damp cliff. det. A. Smith, 1985 det. D. L., 1983.
- MO, . 9463 *Lygodium radiatum* Prantl det. D. B. Lellinger 1977
Small sterile vine.
- MO, . 9464 fern. *Lygodium radiatum* Prantl
rocky bank. det. D. B. Lellinger 1977

Jan. 26, 1974

105

Canal Zone, Panama

17PPA 428-432/100-114

MO, 5.

9465 Acanth.

Shrublet 40 cm. tall along streambed.
Corolla light blue.

MO, .

9466

Gurania suberosa Gurania megistantha Donn. Sm.
det. Wunderlin 1975

Vine with soft corky bark, the bright
orange flowers born on the lower leafless part.

MO, , .

9467

Coccoloba

Shrub 1 m. tall, inflorescence lax,
tepals bright red in fruit.

Jan. 27, 1974

Canal Zone, Panamá

17PPA 416/081

MO.

9468 *Acalypha arvensis* Poepp.Single plant seen, open grassy gravel
along RR, 1/2 km. W of Gamboa. alt. 30 m.

17PPA 410/081

MO.

9469 ~~mont. Lab.~~ *Hyptis spiciqera* Lam.Only one plant seen. Gravel along RR, 1 1/2 km.
W of Gamboa. alt. 30 m. det. A. R. 001, 1993

17PPA 407-8/082-3

9470-9475 Secondary tropical moist forest around pond
along RR, 1 1/2 km. W of Gamboa. alt. 30 m.

MO, 4.

9470 fern. *Nephrolepis*.Epiphyte on trunk of *Scheelea zonensis*. Fronds
hanging, pale green.

MO, MAD, 5.

9471 Myrsin.

MADw 32559. Shrub 2 m. tall, Inflorescences
branches bright pink, fruit green, to 9 mm.
diam.

MO, MAD, 17.

9472 Myrsin. *Stylogyne standleyi* LundellMADw 32560. Shrub 5 m. tall. Inner bark
and heartwood reddish. Inflorescence branches
pink, fruit green, to 9 mm. diam. det. A. Gent.,
1974.

MO,

9473 Myrsin.

Seedlings common beneath #'s 9471 and 9472
which were growing next to each other and
surely all the same species. Seedlings
with the same pellucid punctations.

Jan. 27, 1974

107

Canal Zone, Panamá

17PPA 407-8/082-3

det. T. Bennington

MO, 8.

9474

Sapot. Pouteria sapota (Jacq.) H.E. Moore & Stearn
Tree 10 m. tall, 60 cm. dbh, bark soft, similar
in pattern to that of Fraxinus pensylvanica MS,
branches widely spreading. White latex seen
only in the trunk, scant. Fruit mealy brown,
to 8 x 6.5 cm. (some seen on tree larger).

Endosperm(?) white, with smell of peach pits.
Seed light brown, scar extending entire length.

MO, .

9475

Lygodium venustum Sw. det. D.B. Kellinger
1977
Young sterile vine.

MO, 6.

9476

Melochia lupulina Sw. det. R. Liesner, 197-
Shrublet, 1/2 m. tall at brushy edge of woods.
Petals white with yellow spot.

17PPA 407/082

~~9477-D~~

MO, MAD, 7.

9477

Desmodium cajanifolium (HBK.) DC. det. B. Schubert,
1979
MADW 32561. Shrub 3 m. tall along RR,
dominated by Panicum maximum, Heliconia
latispatha. Flowers purple, then blue-green.
1 1/2 km. W of Gamboa. alt. 30 m.

17PPA 407/083

MO.

9478

Bignon. Phryganocydia corymbosa (Vent.) Bur. ex
K. Schum.
Vine trailing over clay of roadside bank
near airfield, 1 1/2 km. W of Gamboa. alt. 35 m.
Corolla light purple. det. A. Gentry, 1974

MO, 23.

9479

Sterculia apetala (Jacq.) Kunt. ! R. L.
Tree 14 m. tall, 30 cm. dbh diam. with
buttresses to 2 m. high. Edge of secondary
tropical moist forest 1 1/2 km. W of Gamboa

Jan. 27, 1974

Canal Zone, Panamá

17PPA 407/083

near airfield. alt. 40 m. Flowers hanging,
with strange odor, like cake or burnt sugar.
Calyx with reddish hairs on outside, yellowish
with red lines within.

17PPA 407-8/082-3

9480-9486

On trunk and larger branches of Sapot.

9474.

F. •

9480 hepat.

F, .

9481 hepat.

US.

9482 lichen.

US.

9483 " " graphid.

US, .

9484 " "

US, , , .

9485 " "

US, .

9486 " "

Jan. 29, 1974

9487 filled
see p. 71

109

Canal Zone, Panamá

17 PPA 478-81/019-022

9488-9489

Roadside 1/2 km. W of Summit Gardens. alt. 70 m.
Shrubby.

MO, 5.

9488

Malpigh. Banisteriopsis muricata (Cav.) Xuatrec.
Vine to at least 4 m. ± same vine as collected
in flower Oct. 23, 1973 sub. # 7536. det. J. Croat, 1975

MO, , .

9489

Sapind. Serjania rhombea Radlk. det. J. Croat
Woody vine, in roadside shrubs. Fruit becoming
bright red.

17 PPA 477/022

9490-9495

Weedy horse pasture now ungrazed for
6 months or more. 1/2 km. W of Summit
Gardens. alt. 70 m.

MO, 28.

9490

Teramnus uncinatus (L.) Sw.
Herbaceous vine. Common.

MO, 4.

9491

Cucurb. ? Melothria lobata Cogn. det. Wunderlin 1975
Herbaceous vine. Fruit to ca. 3.5 x 3 cm.,
rind tough, beautifully patterned with
light and dark green.

MO, , , , , .

9492

Centrosema plumieri (Turp.) Benth. det. R. L. 1975
Herbaceous vine. Most fruit green, some
brown but not yet dehiscing in the field.

MO, 8.

9493

Malv.
To 2.5 m. tall. ~~70~~ Viscid. Flowers yellow.

MO, 14.

9494

Stylosanthes guyanensis (Aubl.) Sw. det. R. L. 1975
Sprawling herb to 1 1/2 m. tall. Viscid. Flowers yellow.

MO.

9495

Legum. Calopogonium mucunoides Desv.
Common herbaceous vine. det. W. G. D'Arcy, 1979

Jan. 30, 1974

Canal Zone, Panamá

17 PPA 426/078

MO, 30.

9496

Nelsonia brunelloides (Lam.) Ktze.

Common on open gravel of RR in Gamboa, with Alysicarpus vaginalis, Chamaesyce spp. and other similar weeds. Corolla lobes blue, tube white. alt. 30 m.

17 PPA 482-4/017-020

9497-9501

Near Summit Naval Communications, 1/2 km. S of Summit Gardens. alt. 75 m.

MO.

9497

Solanum lanceifolium Jacq. ! D'Arcy 1974
~~unbranched~~ ~~shrub~~ 1 m. tall, not yet conspicuously viny.
 with Pennisetum, Panicum maximum,
Hyparrhenia rufa on roadside. Common in vicinity, often in clearings in the woods, mostly ~~just~~ young and not yet blooming. Hairs on outside of corolla purple in bud, fading in anthesis. Corolla lobes white.

MO, 15.

9498

Cassia moschata HBK. det. R. Liesner, 197-
 Tree 3 10 m. tall, 25 cm. tall in secondary tropical moist forest at edge of pond.
 Fruit green, hanging

MO, ¹⁷~~15~~

9499

Comp. Fleischmannia stndairii (Benth.) King & Robins.
 1 m. tall. with Rhynchospora cephalotes in ~~clearing~~ ^{opening} secondary tropical moist forest.
 Flowers blue. det. R. L. 1976.

MO, 23.

9500

Combretum fruticosum (Loe fl.) Stuntz det. C. Stace, 1982
 Woody vine on roadside shrubs. Fruit green

Jan. 30, 1974

Canal Zone, Panama

17PPA 482-4/017-020

MO, 4.

9501

Poinsettia

and dark red.

Rocky grassy roadside. Herbs to 1 m.
tall. Sap bluish milky.

Jan. 31, 1974

Canal Zone, Panamá

17PPA 403/084

- N
MO, 32. 9502-9503 Gravel along RR, 2½ km. W of Gamboa. alt. 30 m.
9502 Legum. Rhynchosia minima (L.) DC. var. minima
Herbaceous vine trailing over gravel, forming
a tangled mat for lack of things to climb on.
Flowers yellow with purple lines. det. J.W. Greas. 1976
- MO, 5. 9503 Eragrostis
Spreading clumps. Young inflorescences
purplish.

17PPA 397/085

9504-9507 Along RR, 3 km. W of Gamboa. alt. 30 m.

- MO, MAD, 13. 9504 Amaranth.
MADw 32562. Viny, weak stemmed scrambling
shrub, 3 m. tall. In patch of Gynierium sagittatum.
- MO, 22. 9505 Rub. Mitracarpus hirtus (L.) DC. det. J. Dwyer 1974
Common in RR gravel. Corolla white.
- MO, 11. 9506 Lab. Hyptis pectinata (L.) Poit.
To 1½ m. tall, woody at base. Strongly and not
pleasantly aromatic. Occasional in RR gravel. Corolla
pale purplish green, filaments and style purple.
- MO, 17. 9507 Scroph. Bacopa procumbens (Mill.) Greenm. det. J.H. 1974
forming mats on RR gravel. Corolla yellow.
Mecardonia procumbens (Mill.) Small det. R. 1980
- 17PPA 409/081
MO, 19. 9508 Gram. Arundinella deppeana Nees ex Steud.
Colony in wet spot, grassy area along RR,
1½ km. W of Gamboa. alt. 30 m. Apparently rare along
RR for first 3 km. W of Gamboa. det. G. Davidse, 2000

Feb. 1, 1974

Canal Zone, Panama

17PPA 484-5/034-5

~~9509-9520~~ Top of Semaphore Hill at Radar station, $1\frac{1}{2}$ km.
N of Summit Gardens. alt. 200-240 m.

Secondary tropical moist forest and roadside.

MO, 11.

9509 Enterolobium schomburgkii Benth.

Tree 15 m. tall with 2 40 cm. dbh. trunks
from the base. Fruit green.

MO, , , , .

9510 Lygodium venustum Sw. det. D.B. Lellinger 1977

Vine on shrubs at radar station clearing.

MO, , .

9511 Ochroma pyramidale (Lam.) Urb. det. A. Gentry, 1975

Tree 8 m. tall, 20 cm. dbh. Cut twigs exuding
clear mucilage. I have seen the dropendola
() visiting this species,
and probe into the flowers with its long beak.
It seemed to be drinking(?).

MO, .

9512 Comp. Senecio confusus Britten (aff) det. T.M. Barkley 1976

Vine in shrubs at edge of clearing. Disc
yellow orange, rays orange.

MO, 11.

9513 Malpigh. Banisteriopsis muricata (Cav.) Cuatrec. 1975 det. J. Croat

Woody vine in shrubs. Wings reddish.

MO, 9.

9514 Pteridium aquilinum var. caudatum (L.) Sadeb.

Fronds to 2 m. long, arching, arising
singly. Edge of clearing. det. D.B. Lellinger 1977

MO, 8.

9515 Dioclea

Woody vine in small tree. Inflorescence
erect, flowers light purple, fruit green,
immature.

MO, 6.

9516 Helioarpus

Small tree 7 m. tall.

Feb. 1, 1974

Canal Zone, Panamá

17PPA 484-485/034-035

- MO. 9517 Passiflora vitifolia HBK. det. A. Gentry, 1975
Small vine to 3 m. Flowers bright red.
- MO, , , . 9518 Hymenaea courbaril L.
Tree 8 m. tall, 25 cm. dbh. Fruit brown.
- MO, , , . 9519 Gent. Schultesia lisianthoides (Griseb.) Benth.
Weeds in gravel around radar station.
Corolla pale purple. det. J. Dwyer, 1975
- MO, 8. 9520 Piper schiedeianum Steud. det. M. Tebb, 1988
Shrub 2 m. tall at edge of woods. Spikes
± erect.

Feb. 2, 1974

115

Canal Zone, Panamá

17PPA 483/022

MO, , .

9521 Cosmos sulphureus Cav. det. R.L. 1976

Spontaneous? Herb 1.5 m. tall, it was 25 cm. tall in mid-August. Hedge at old herbarium building, Summit Garden. alt. 80 m. Rays light purple, disc yellow.

17PPA 487/017

MO, , .

9522 Apoc. Prestonia exserta (A. DC.) Standl.

Small vine 1 m. ~~long~~ long on RR gravel, 1/2 km. SE of Summit Garden. alt. 75 m. Rare. Flowers odorless, corolla greenish yellow with white throat and "horns." det. J.F. Morales, 1995

17PPV 502/993

MO, , .

9523 Lygodium venustum Sw. det. D.B. Lellinger 1977

Vine to 2 m. tall in shrubs, shady roadside, Gaillard Hwy., ~~1 km.~~ 1 km. NW of Paraíso. alt. 100 m.

17PPV 500/995

MO, 4.

9524 Pseudobombax septenatum (Jacq.) Dugand

Tree 10 m. tall, 1 m. dbh, trunk swollen near base, green striped. Along Gaillard Hwy. 1 km. NW of Paraíso. Probably planted, there are several other trees of this species in a line. alt. 90 m. Leafless. Calyx green and red with red glands. Stamens and style white when flower first opens. Petals white within, golden brown on outside. Largest fruit collected 11 x 15 cm., green with irregular purple strips.

Feb. 2, 1974

Canal Zone, Panama

17PPV 500/995

MO, 6.

9525 Bignon. Arrabidaea patellifera (Sch. Hdl.) Sandwith
Woody vine in small Apeiba tree, brushy
roadside along Gaillard Hwy, 1 Km. NW of
Paraiso. alt. 90 m. Fruit green. det.

17PPA 498/003

MO, 57.

9526 Machaerium milleflorum Pittier det. John Dwyer
Viny tree 8 m. tall reclining in another
small tree. Brushy second growth tropical
moist forest along Gaillard Hwy. 2 Km.
NW of Paraiso, near Summit Hills Golf Course. Panicles
to 1 m. or more long, $\frac{1}{2}$ m. wide. Flowers
purple, odorless. alt. 75 m. : Liesner, 1978

17PPA 494/009

MO, 6.

9527 Muntingia calabura L. det. R. L. 1979
Small tree 7 m. tall. Overgrown abandoned
road between Summit Hills Golf Course and Summit
Naval Radio Station, $\frac{1}{4}$ Km. W of ~~the golf~~ Gaillard
Hwy. Petals white. Young fruit green.
alt. 70 m.

Feb. 4, 1974

117

Canal Zone, Panama

17PPA 417/082-4

9528-9536

Edge of pond and brushy ^{secondary} tropical moist forest. $\frac{1}{2}$ km. W of Gamboa. alt. 30 m.

~~MO.~~ MO.

9528 Bignon. Phryganocydia corymbosa (Vent.) K. Schum.
Woody vine. Fruit green. det. Agentry, 1974

MO, 15.

9529 Gram. Echinanthus tenuis (J. Presl + C. Presl) Hitchc. + Chase
det. R. L. 1976

MO, 5.

9530 Commel. Tripogandra serrulata (Vahl) Handl.
Grassy edge. Trailing, rooting at nodes.
Stems green with purple stripes. Petals pale purple.

MO, , , .

9531 Dillenia ^{adventitious roots, roots}
Shrub 3 m. tall, arching, with stilt roots
something like Rhizophora mangle. Petals
yellow. Open fruit dark pink, seeds with
orange aril.

MO, , , .

9532 Leg. - Mimos.

Tree 6 m. tall, fruit green. No ants.

MO, 7.

9533 Gutt. Vismia billbergiana Beurl.

Shrub 3 m. tall. Petals pale green, young
fruit green. det. N. Robson, 1978.

MO, , .

9534 ? Mesechites

Vine in shrubs. Corolla tube pink or
greenish white below constriction, upper
tube and throat light green, lobes white.
Flower odorless.

MO, 7.

9535 Homolepis aturensis (HBK.) Chase

Decumbent, rooting at nodes, forming

118 Feb. 4, 1974

Canal Zone, Panamá

17PPA 417/082-4

MO, MAD, II.

- loose mat to 1 m. high.
9536 *Cestrum megalophyllum* Dun. det. D'Arcy 1974
MADw 32563. Slender shrub 3 m. tall.
Leaves slightly fleshy. Flowers light green.

17PPA 416-7/085-092

- 9537-9544 Brushy area and grassy area along fence
around E side of ammunition depot. 1 Km. NW
of Gamboa. alt. 35 m.

MO, 6.

- 9537 *Physalis pubescens* L. det. D'Arcy 1974.

Grassy mowed area. Corolla yellow with
dark purple brown spots within.

MO, 5.

- 9538 *Muntingia calabura* L. det. R. H. 1979

Common in one area with all sizes from
up to small trees 7 m. tall. Petals white,
young fruit green.

MO, , .

- 9539 *Comp. Tradax procumbens* L. det. N. Dillon 1977

Open grassy area.

MO.

- 9540 *Bromel. Aechmea pubescens* Baker det. ¹⁹⁸⁷ Utley,

Epiphyte $1\frac{1}{2}$ m. from ground on a slender
woody vine. Secondary tropical moist forest

MO, 12.

- 9541 *Adelia triloba* (Muell. Arg.) Hemsl.

Shrub 6 m. tall, 6 cm. dbh., spinescent.
Fruit green.

MO, , .

- 9542 *Rub. manettia reclinata* L. det. J. Dwyer, 1974

Vine in shrubs. Corolla pale pink.

✓MO, .

- 9543 *Rub. Psychotria horizontalis* Sw. det. ¹⁹⁷⁵ J. Dwyer,

Shrub 1 m. Leaves ~~for~~ pale, almost gray-
green. Corolla white, berries orange.

Feb. 4, 1974

119

Canal Zone, Panama

17PPA 416-7/085-092

MD, .

9544 Capsicum Solanum americanum Mill. det. D'Arcy
1974

Grassy edge. 1 m. tall. Corolla white.

Feb. 5, 1974

17PPA 484-5/018-021

9545-9549

South side
~~Ran.~~

of Summit Gardens. alt. 75m.

MO, .

9545 fern Thelypteris dentata (Forssk.) E. St. John det. D.B. Gellinger 1977
Secondary tropical moist forest. Terrestrial.

MO, 7.

9546 Convolv.

Vine ⁱⁿ ~~at~~ shrubs at edge of secondary tropical moist forest. Dry fruit with transparent top.

MO, MAD, 10.

9547 Hyptis pectinata

MADw 32564. 2 m. tall, woody at base.

Gravel along RR. Common in places, ~~variable~~ Variable in size, from 0.25 to 2.5 m. tall. Unpleasantly aromatic. Corolla pale greenish purple, the stamens, style and pouches lower corolla lobe purple.

MO, 6.

9548 Desmodium

1 m. tall in gravel along RR. Flowers blue-green.

MO, 9.

9549 Aeschynomene histrix Poir. var. incana (Vog.) Benth.

Low spreading shrublet, 30 cm. tall. Leaves slowly sensitive. Flowers dull orange.

Gravel along RR. det. R. Liesner, 1977.

Feb. 6, 1974

121

Canal Zone, Panamá

17PPA 424/079

9550-9551 Gravelly waste places, Dredging Division,
Gamboa. alt. 30 m.

MO, 16.

9550 Eragrostis ciliaris (L.) R. BR.

With Nelsonia brunelloides, Chamaesyce
hirta and other small weeds. det. J. Davidson,
1974

MO.

9551 Panicum

Feb. 7, 1974

Canal Zone, Panama

17PPA ~~458-046~~

460/044

9552-9554 Brushy edge of secondary tropical moist forest along Baillard Hwy, 4 Km. SE of Gamboa. alt. 85 m.

MO, 9.

9552 Machaerium milleflorum Pittier det. J. Dwyer
Woody vine, stem 2 cm. diam. Flowers purple, odorless, visited by small bees.

MO, 4.

9553 Vernonia canescens HBK. det. R.L. 1976
Shrub 2 m. tall. Flowers light purple, odor unpleasant.

MO, 4.

9554 Anacardium
Small tree 5 m. tall. Possibly planted as there are old house sites in vicinity. "marañón"
Petals first pale green, then developing red stripes and finally becoming all red.

17PPV 601/905

9555-9556 Steep lawn, Ancón. alt. 20 m.

MO, .

9555 Lygodium venustum Sw. det. D.B. Kellinger 1977
Young plants, becoming viny.

MO, .

9556 Gen. Schultesia lisianthoides (Griseb.) Benth.
Corolla light purple. det. J. Dwyer, 1978

17PPA 485-7/023-5

9557-9561 Summit Garden. alt. 80 m

MO, .

9557 fern. Phymatosorus scolopendria (Burm.) Pic. Serm.
Cult. Terrestrial. det. H. V. d. Werff, 1982

MO, , , , .

9558 fern. Thelypteris dentata (Forssk.) E. St. John
Cult. Terrestrial. det. D.B. Kellinger 1977

Feb. 7, 1974

123

Canal Zone, Panamá

17 PPA 485-7/023-5

- MO, , , . 9559 Lygodium venustum Sw. det. D.B. Keellinger 1977
Vine to 2.5 m. in shrubs. Probably
spontaneous.
- MO, 7. 9560 Najas arguta HBK. det. R. L. 1977
Submerged aquatic in the lily pond.
- MO, 6. 9561 Lemna Spirodela punctata (Meyer) Thompson
Floating in lily pond. L. Davenport, FBI

Feb. 8, 1974

Canal Zone, Panamá

17PPA 478/027

MO, 44.

- 9562 Colubrina glandulosa Perkins var. glandulosa
Small tree 8 m. tall, 20 cm. dbh. Along
Baillard Hwy, 1 km. NW of Summit Garden.
alt. 80 m. Edge of secondary tropical moist forest.
Fruit green, held erect. Same tree coll. in
flower Dec. 28, 1973 sub # 9055. det. M. C. Johnston,
1974

17PPA 450/055

MO, 7.

- 9563 Inga pavoriana G. Don det. C. Romero, 2006
Shrub 6 m. tall with several stems to 10 cm.
diam. Edge of secondary tropical moist forest
along Baillard Hwy, 3 km. SE. of Gamboa.
alt. 60 m. Fruit green, mostly held
from erect to horizontal. Same shrub
coll. in flower Nov. 29, 1973 sub # 8470.

17PPA 434/077

MO, 29.

- 9564 Inga punctata Willd. det. R. Liesner, 1974
Spreading tree 8 m. tall, 35 cm. dbh at
playground at top of hill, Gamboa. alt.
45 m. Same tree coll. in flower Oct. 11, 1973
sub # 7379. Fruit green.

17PPV 599/906

- 9565-9568 on cult. Hevea 60 cm dbh., 1-2.5 m. from
ground. Ancón. alt. 30 m.

US.

9565 lichen graphid.

US.

9566 " "

US,

9567 " "

US,

9568 " "

Feb. 9, 1974

125

Canal Zone, Panamá

17PPA 366-370/135

+ 9587

9569-9580 Premontane wet forest along Rio Mendosa
0-1/2 km. downstream from Pipeline Road
bridge, 8 km. NW of Gamboa. alt. 90 m.

MO,

9569 Acanth.

Slender unbranched shrubs to 2 m. tall.
Flowers bright red.

MO, U, , .

9570 Violac. *Rinorea lindeniana* (Tul.) O. Kuntze

Shrub 2 m. tall on creek bank. ^{var. *fernandeziana*}
det. W. Hekking, 1982

MO, , , .

9571 Cyperac. *Hypolytrum nicaraguense* Liebm.

Clumps on bank. Base of stem and
offshoots pink. det. G. Davidse, 1975

MO, 15.

9572 *Inga portobellensis* Beurl. det. G. T. D. Pennington
Tree 8 m. tall. Calyx green, corolla
lighter green with purple hairs. Filaments
white.

MO, , .

9573 Guttif. *Vismia billbergiana* Beurl. det. N. Robson, 1978

Shrub 4 m. tall, ant infested. Petals light
green outside with orange spots, white hairs
on petals within and stamens. Ovary yellow
with orange spots. Young fruit green
with orange spots and orange sap.

MO, 4.

9574 *Hampea*

Tree 15 m. tall, 25 cm. dbh., edge of forest.
Fruit ^{brown} mostly old, seeds black, aril white.

MO.

9575 Loranth. *Oryctanthus occidentalis* (L.) Eichl.

On *Hampea appendiculata* # 9574. Inflorescence
green, tip of fruit turning yellow. Leaf
veins purple beneath.

Feb. 9, 1974

Canal Zone, Panamá

17PPA 366-70/135

F, .

9576 hepat.

rock along stream.

MO, , , .

9577 Rub. Diodia spicata Mig. det. C. Adams, 1991

Sub shrub 1/2 m. tall in small opening along stream. Corolla pale green.

MO, , .

9578 Prestonia

Vine hanging from 8 m. in tree. Corolla white, lobes pale purple, the callous orifice yellow.

MO, , .

9579 Peperomia macrostachya (Vahl) A. Dietr. ?
det. R. L. 1976

Epiphyte in small tree over stream. Based in an ant nest with aggressive biting ants.

MO, , , .

9580 Gentian. Lisianthus skinneri (Hemsl.) Kuntze
Shrub 2 m. tall. Corolla yellow, greenish at tip. det. R. Wilbur, 1993

17PPA 370/135

MO, 6.

9581 Gram.

Grassy roadside, Pipeline Road bridge at Rio Mendosa, 8 km. NW of Gamboa. alt. 100 m.

17PPA 390/117

9582-9583 Edge of secondary tropical moist forest at Pipeline Road bridge over Rio Frijoles. 5 km. NW of Gamboa. alt. 50 m.

MO, 10.

9582 Asclep. Fischeria panamensis

det. D. Spellman 1974

Vine in shrubs. Flowers odorless, petals light green with dark green lines.

Feb. 9, 1974

127

Canal Zone, Panamá

17PPA 390/117

MO, 16.

9583 Cestrum racemosum Ruiz + Pav.

Large shrub 5 m. tall, 15 cm. dbh. Flowers odorless when collected at 5:30 P.M., developing a sweet odor by 7:00 P.M. after cut. Corolla light green. Fruit green, turning purple. det. M. Nee, 2003

17PPA 412/085

9584-9585 Edge of secondary tropical moist forest along Pipeline Road, 1½ km. NW of Gamboa. alt. 40 m.

MO, , , ,
 , .

9584 Pentagonia

Shrub 2 m. tall. Calyx bright red, corolla yellow, tube greenish within. ♀ Immature fruit green. Flowers odorless.

MO, , .

9585 Piper

Bushy vine in shrubs and ragged leaf bases of a Scheelea zonensis.

17PPA 371/134

MO, .

9586 Thevetia

Shrub 1 m. tall. Roadside bank with tangle of Dicranopteris pinnata along Pipeline Road, 8 km. NW of Gamboa. alt. 100 m. Sap milky. Fruit turning from green to bright red.

17PPA 366-70/135

MO, 5.

9587 Piper pseudogargaranum Trel.

Shrub 1.5 m. tall. Spikes strictly erect. with # 9569-9580. det. J. Conrad, 1975

Feb. 11, 1974

Canal Zone, Panama

17PPA 360-363/144

- 9588-9599 Premontane wet forest along Pipeline Road,
9 Km. NW of Gamboa. alt. 150 m.
- MO, . 9588 Ouratea
Woody vine 1 cm. diam. Receptacle red, fruit
green.
- MO, MAD, , . 9589 ? Mollinedia Darienensis Standl. det. J. H. 1975
MADw 32565. Shrub 3 m. tall. Fruit dark purple.
Dried wood pleasantly aromatic, like Juniperus
- MO, , . 9590 Neea
Shrubs, little branched, 1-3 m. tall. Fruit
turning purple.
- MO, , . 9591 Dictyoxiphium panamense Hooker det. D. B. 1977
mo, 5. 9592 fern. Nephrolepis pendula (Raddi) J. Sm. det. A. R. Smith, 1975
Large rotten log, originally a canopy epiphyte(?)
- MO. 9593 orchid
On trunk of huge tree, originally 20 m.
from the ground. Fruit green.
- MO, . 9594 Bignon. Stizophyllum inaequilaterum Bur. + K. Schum.
Woody vine. Sterile. det. A. Gentry, 1974.
- MO, , . 9595 Annon.
Slender treelet 5 m. tall. Fruit ~~yellow~~ ^{gone} orange.
- MO. 9596 Annon. Unonopsis pittieri Safford s.l. det. R. L.
Slender treelet 5 m. tall. Fruit yellow orange.
- MO, . 9597 Suarzia simplex (Sw.) Spreng. det. J. Dwyer
Shrub 4 m. tall. Fruit orange, bursted
and seeds gone.
- MO, 8. 9598 Rub. Psychotria marginata Ruiz + Pav.
Shrubs 1-2 m. tall. Fruit green. det. J. Dwyer, 1975
- MO, , , . 9599 Rub. Psychotria erecta
shrub 2 m. tall. Fruit green. det. J. Dwyer, 1975

Feb. 11, 1974

Canal Zone, Panama

17PPA 359/148

9600-9602, Premontane wet forest along Pipeline
9609 Road, 10 km. NW of Gamboa. alt. 130 m.

MO, MAD, , ,

9600 Rub. Psychotria cataphylla St. det. J. Dwyer, 1975
MADu 32566. Shrub 5 m. tall. Fruit green,
then orange and finally dark red.

MO.

9601 Rub. Notopleura uliginosa (Sw.) Bremek.
Shrublet 0.75 m. tall. Corolla tube white,
lobes red, fruit red. det. C. M. Taylor, 2001

MO.

9602 orchid.

On fallen branch, probably a canopy epiphyte.
Flowers white.

MO, .

9609 fern.

On fallen branch, probably originally a canopy epiphyte.

17PPA 359/152

9603-9606 Premontane wet forest along Río Macho at
Pipeline Road bridge, 10 km. NW of Gamboa.
alt. 115 m.

MO.

9603 Triplaris

Rocky streambank.

MO, .

9604 Hymenophyll. Trichomanes curtii Rosenst. det. D. B. Hurlinger 1977

Common from 1-8 m. on trunk of 15 cm. dbh.

Poulsenia armata along stream.

MO, .

9605 Piper

Shrub 1/2 m. tall.

MO, .

9606 Monophyllorchis

Terrestrial, roots fleshy. Flowers pale green.

Feb. 11, 1974

Canal Zone, Panamá

17PPA 336/173

9607-9608 Pipeline Road at Río Agua Salud bridge
 13 km. NW of Gamboa. alt. 50 m. premontane wet
 forest?

MO, , .

9607 *Bauhinia reflexa* Schery det. Wunderlin 1975

Woody vine. Fruit green.

MO,

9608 moss. *Leucobryaceae* - *Octoblepharum albidum* Hedw.
 On wooden bridge.

Feb. 12, 1974

Prov. Coclé, Panamá

17PNV 966/544-546

9610-9657 Tropical wet forest, La Mesa, 4 km. N of El Valle. alt. 875 m.

MO, 4. 9610 Bromel. Tillandsia insignis (E. Morr.) L.B.Sm. & P.H.
viny epiphyte. det. J. Utley 1977MO, 13. 9611 aroid. Anthurium scandens (Aubl.) Engl.det. T. Croat
1975 Canopy epiphyte with dense root mass.MO, . 9612 Eric. Themistoclesia pentandra Slenner
Canopy epiphyte. Growing from light brown tubers embedded in masses of epiphytic aroid roots etc. Fruit green. det. W. Burley & L. L. L. 1978MO, , , . 9613 ~~Rub.~~ ^{melast.} Blakea crassifolia Almeda
Epiphytic shrub. det. F. Almeda, 1982MO. 9614 orchid
Epiphyte. Flowers odorless, pale yellow with purple spots and darker orange areas on lip.MO. 9615 Bromel. Guzmania musaica (Linden & Andre) Mez
det. Utley 1985 Epiphyte. Leaves mostly purple beneath, purple and green variegated above. Bracts red.MO, . 9616 Laciasis
Viny, scrambling to 2 m. in fallen trees. Spikelets turning black.MO, 8. 9617 Mollinadia darienensis Standl. det. J.H., 1975
Shrub 3 m. tall. Fruit green.MO, 4. 9618 Polypodium subviride Kellinger
Epiphytic vine. det. D.B. Kellinger 1977MO. 9619 Rub.
Shrub. Rachis of inflorescence purple. Fruit dark purple-green

Feb. 12, 1974

Prov. Coclé, Panamá

17PNV 966/544-46

- MO, . 9620 Hymenophyllum polyanthos (Sw.) Sw. det. D.B. Kellinger 1977
Covering branches of tree.
- MO. 9621 fern. Grammitis subcapillaris (Christ) Seymour
Epiphyte. det. D.B. Kellinger 1977
- MO, , . 9622 fern. Nephrolepis rivularis (Vahl) Mett. ex Kuhn in Urb.
Epiphyte. det. D.B. Kellinger 1977
- MO, , , . 9623 Peperomia panamensis C.D.C. det. L.L. 1976
epiphyte
- MO, . 9624 fern. Vittaria remota Fée
epiphyte. det. D.B. Kellinger 1977
- MO, . 9625 Eric. Psammisia ramiflora Klotzsch. det. Wilbur Luteyn, 1978
Epiphytic shrub(?). Fruit green, calyx red.
- MO, 8. 9626 ? Ilex maxima W.J. Hahn det. W. Hahn, 1995
Tree 7 m. tall. Fruit green.
- ? 9627 Gesner.
Epiphyte.
- MO, , , . 9628 Anthurium vallense Croat. det. T. Croat 1978
Short vine appressed to tree trunks. Common.
Spathes and spadix green. Berries bright red when ripe.
- MO, . 9629 fern. Asplenium holophlebium Baker det. D.B. Kellinger 1977
On stems of small shrubs.
- F. 9630 hepat.
on fallen log.
- MO. 9631 Spathiphyllum laeve Engl. det. T. Croat 1978
Terrestrial. Spathes and spadix green.
- MO. 9632 Cyclanth. Erodianthus funifer (Poir.) Lindau
"Vine" 1 m. long on ground. det. Eriksson & Hammett, 1986

Feb. 12, 1974

133

Prov. Coclé, Panamá

17 PNV 966/544-46

- MO, 4. 9633 Cyperac. Mapania pycnophylla (Benth.) Benth.
Clump. det. G. Davidse, 197-.
- MO, 5. 9634 Hymenophyll. Trichomanes rigida Sw. det. D.B. Lellinger 1977
Abundant on rocks of now dry streamlet.
- MO. 9635 Eric. Vaccinium dissimile Blake det. R. Wilbur, 1977
Epiphyte on shrub at 1 m. Flower dark red in bud.
- MO, , . 9636 Melastom.
Shrub 2 m. Flowers pink.
- MO, . 9637 Rub. Psychotria orchidearum det. J. Dwyer, 1975
Epiphytic shrub. Leaves fleshy. Flowers and fruit red.
- MO, , , , . 9638 Melastom. Monolena panamensis Warner, ined.
Terrestrial. Petals pink. det. R. Warner, 1980
- MO. 9639 moss.
on branch.
- MO. 9640 Polypod. Grammitis trifurcata (L.) Copel. det. D.B. Lellinger 1977
Epiphyte on tree trunk at 1-2 m. from ground.
- MO, , , , . 9641 Elaphoglossum crinitum (L.) Christ det. D.B. Lellinger 1977
at 1 m. on trunk of large tree and on trunk of fallen palm.
- MO, 8. 9642 fern. Cyathea fulva (Martens + Gal.) Fée det. D.B. Lellinger 1977
Tree fern, trunk 2 m. tall, 4 cm. diam., others in vicinity to 5 m. tall. Petiole 40 cm. long, blade 1.1 m. long.
- MO, 5. 9643 Scleria latifolia Sw. var. arundinacea (R. Kunth) Standl. + Steyererm.
Inflorescence, culms and base of sheaths purple. det. G. Davidse, 1974
- MO, , . 9644 fern. Grammitis serrulata (Sw.) Sw. det. D.B. Lellinger 1977
fallen log.

Feb. 12, 1974

Prov. Coclé, Panamá

17 PNU 966/544-46

- MO, . 9645 Palm. Synechanthus warscewiczianus Wendl.
2 m. tall. Inflorescence green. G. de Nevers, 1986.
- MO. 9646 Palm. Calyptrorhynchus allenii (L.H. Bailey) de Nevers
Stem 1½ m. tall. det. A. Henderson, 2004 ^{ssp. allenii}
- MO. 9647 Orchid.
Epiphyte. Fruit green.
- MO, , . 9648 Loranth. Struthanthus marginatus (Desr.) Blume
Parasitic shrublet on Melastome. Fruit bright orange. det. J. Kuijt, T. Croat, 1974
- MO, b. 9649 Stegolepis
Forming a large mass on tree trunk, each clump holding humus.
- US, . 9650 Cladonia
On humus accumulated in Stegolepis # 9649
- F. 9650 a hepat with 9650.
MO, . 9651 Myrsin.
Shrub 5 m. tall. Fruit green.
- MO. 9652 Lycopodium callitrichifolium Mett. in Tr. & Blanch. det. D.B. 1977
Epiphyte. ^{Heckinger}
- MO, . 9653 Gesner. Alloplectus panamensis Morton det. G. Skog 1977
Calyx and corolla red.
- MO, , , . 9654 Cactus Epiphyllum pittieri (Web.) Br. & Rose det. H. Bravo & L. Scheinvar, 1985
Epiphytic shrub, branches scrambling or hanging.
- MO, b. 9655 fern.
Epiphytic vine.
- MO. 9656 Bromel
Epiphyte. Fruit black.
- MO. 9657 orchid.
Fruit green. Epiphyte.

Feb. 12, 1974

135

Inov. Coclé, Panamá

17 PNU 968/545

9658-9659 Along now mostly dry rocky stream in tropical wet forest, La Mesa, 4 km. N of El Valle de Antón alt. 850 m.

MO, .

9658 ~~Piperac.~~ *Peperomia* aff. *tsakiana* C. DC.
det. R. L. 1976 *P. pyramidata* Sodiro
det. R. Callejas, A.

MO.

9659 *Bolbitis oligarchia* (Baker) Hennipm.
det. D. B. Kellinger 1977

ca. 17 PPV 002/504

9660-9661 3 km. E of El Valle de Antón ~~on road~~ at
9665 km. 21 on road down to coast. alt. 725 m.

MO, 8.

9660 *Ficus oerstedia* (Mig.) Mig. det. C. C. Berg 1976
Tree 8 m. tall. Fruit red, 7 mm. diam. Roadside.

MO, .

9661 *Hypis pectinata*.
Grassy roadside.

MO.

9665 *Lobelia laxiflora* HBK. det. R. Wilbur, 1975
1 m. tall. On roadside. Flowers orange, then red.

17 PNU 966/544-46

9662-9669 with #9610-9657 g.v.

MO, 4.

9662 Annon. *Unonopsis pittieri* Safford s.l. det. R. L.
Fruit orange, turning dark red when ripe,
yellow orange within, 2.7 x 2 cm. Seeds brown.

MO.

9663 Piperac. *Peperomia pernambucensis* Mig.
Epiphyte. det. R. L. 1976

MO, .

9664 *Ageratum*
Roadside. 1 m. tall. Flowers blue.

MO.

9665 Bromel. *Aechmea allenii* L. B. Sm. det. Utley,
1987
Epiphyte. Inflorescence bright pink.

Feb. 12, 1974

Prov. Coclé, Panamá

17PNU 966/544-6

MO.

9667 Melastom.

Small tree. Flower buds purplish.

MO.

9668 Gesner. Columnnea hirsutissima Morton det. L.E. Skog 1977

Epiphyte. Leaves fleshy. Flowers light red.

MO.

9669 Gesner. Paradrymonia macrophylla Wiehl, ined.Epiphyte. Calyx and petioles dull reddish.
Fruit white. det. D.T. Skog 1978

Feb. 13, 1974

137

Prov. Colón, Panamá

17PPA 343-9/325-330

- 9670-9688 Premontane wet forest. Santa Rita ridge,
7 km. by road from Transisthmian Hwy. 3 km. SE
of Puerto Pilon. alt. 200-250 m.
- MO, , , 9670 Rub. Psychotria erecta det. J. Dwyer, 1975
Shrub 3 m. tall. Fruit turning blue-black.
- MO. 9671 Ouratea
Shrub 2 m. tall.
- MO, II. 9672 Gram. Cryptochloa dressleri Soderstrom
Leaves purple beneath. det. G. Davidse, 1982
- MO, II. 9673 Hymenophyll. Trichomanes pinnatum Hedw.
Terrestrial. det. D.B. Hollinger 1977
- MO. 9674 Zillandsia bulbosa Hook. det. Utley, 1985
Epiphyte. Whole plant green.
- MO, MAD, IO. 9675 Guttif. Toumouita stylosa Hemsl. det. D'Arcy, 1980
MADW 32567. Shrub 5 m. tall. Wood hard.
Inner bark and heartwood red. Fruit
greenish tan before splitting, the lobes
reflexing and deep red within. Seeds
bright orange, with yellow latex.
- MO, , . 9676 Mapania assimilis Koyama det. G. Davidse, 1975
- MO, , . 9677 Dioscorea amazonum Griseb. det. O. Tellez, 1986
Herbaceous vine. Flowers green, tinged
with purple, stigma purple.
- MO, . 9678 Prestonia
Vine with white latex, climbing into
small tree. Flowers sweetly fragrant,
corolla tube pink, lobes yellow, callous
orifice white.

Feb. 13, 1974

Prov. Colón, Panamá

17PPA 343-9/325-330

- MO, . 9679 *Annon. Unonopsis pittieri* Safford s.l. det. R.L.
Shrub 5 m. tall. Fruit green.
- MO. 9680 *Adiantum hindsae guianensis* (Aubl.) Dryander ssp.
Terrestrial. *guianensis* det. P.B. Lellinger 1977
- MO, , , , 9681 fern. *Metaxya rostrata* (HBK.) Presl det. D.B. Lellinger 1977
Terrestrial. Petiole 70 cm. long, blade 75 cm. long.
3. 9682 fern.
Rhizome running along in leaf litter.
- MO. 9683 orchid.
Epiphyte. Flowers tinged with orange red.
- MO, MAD, 71. 9684 *Capparis pittieri* Brig. det. H.H. Ellis, 1974
MADw 32568. Tree 14 m. tall, 15 cm. dbh.
Flowers pale green, odorless.
- MO, MAD, 9. 9685 *Apoc. Tabernaemontana undulata* Vahl
MADw 32569. Shrub 5 m. tall with white latex. Flowers fragrant, corolla tube with red lines and spots, lobes yellow. det. A. B. Steudenberg
7. 9686 fern.
Canopy epiphyte.
- MO. 9687 orchid.
Canopy epiphyte. Leaves sometimes glaucous.
- MO. 9688 orchid.
On tree trunk. Fruit gray-green, largest 5.5 x 2.3 cm.

Feb. 13, 1974

9695 see p. 140

139

Canal Zone, Panamá

17PPA 132/234

9689-9690 Premontane wet forest along road S1, 4 km.
W of Gatún Dam. alt. 200 m.

MO, 5.

9689 Gurania makoyana (Lam.) Cogn. det. Wunderlin
1975
Vine hanging out of tree at edge of forest.
Flowers hanging, odorless, calyx orange,
corolla yellow orange, young fruit green.

MO, .

9690 Rub.
Shrub 3 m. tall. Flowers odorless, corolla
white.

ca. 17PPA 120/246

9691-9694, Premontane wet forest along road S1,
9696 5 1/2 km. W of Gatún Dam. alt. 150 m.

MO, MAD, 33. NY, USZ.

9691 Helioscarpus popayanensis HBK. det. R. Liesner,
MADw 32570. Tree 10 m. tall, 15 cm.
dbh. Fairly common at edge of forest. Fruits
reddish.

MO, 4.

9692 Uclastom. Conostegia montana (Sw.) D. Don vel sp. aff.
Small tree 5 m. tall at edge of forest. det. R.L. 1977

MO, 19.

9693 Inga thibaudiana DC. det. R. Liesner, 1971
Tree 7 m. tall at edge of forest. Calyx and
corolla green, fruit green and coiled.

MO, 15.

9694 Calliandra stipulacea Benth. det. R.L. 1975
Shrub 4 m. tall at edge of forest. Fruit
green, erect.

MO, .

9696 ~~9695~~ Palm. Geonoma interrupta (R. + P.) Mart.
det. T. Croat 1976

140

Feb. 13, 1974

Canal Zone, Panama

17PPA 122/254

MO, 28.

9695

Machaerium seemannii Benth. det. J. Dwyer

Woody vine in roadside trees. Fruit
brown around seed, the wing pale
greenish brown. Premontane wet forest
along road 51, 5 km WNW of Gatun Dam.
alt. 160 m.

Feb. 16, 1974

141

Prov. Veraguas, Panamá

9697-9915 Lower montane wet forest 6-7 km W of Santa Fe on new road past ag. school. alt. 2900 ft.

- MO. 9697 Oryza sativa L.
a few plants on open bulldozed clay, only one in fruit. Obviously a casual introduction.
- MO, , , , 9698 Rub. Hillia chiapensis ssp. grandifolia Dwyer, type
Epiphytic shrub 3m. high. Fruit light green.
- MO. 9699 fern. Campyloneurum angustifolium var.
epiphyte ensifolium (Willd.) Farw. det. D.B. Lellinger 1977
- MO. 9700 fern.
Epiphyte.
- MO. 9701 fern. Polypodium triseriale Sw. det. D.B. Lellinger 1977
epiphyte.
- MO. 9702 Bromel. Tillandsia bulbosa Hook.
Epiphyte. det. Utley, 1985
- MO, , , . 9703 Cephaelis elata Sw. det. J. Dwyer, 1975
Shrub 3m. tall. Bracts bright red.
- MO, , , . 9704 Piper
Shrub 2 m. tall. Spikes hanging.
- MO, . 9705 orchid. Ornithidium fulgens Reichenb. f. det. E. Christenson, 1983
Epiphyte. Flowers bright orange, odorless.
- MO. 9706 fern. Lomariopsis fendleri D.C. Eaton det. D.B. Lellinger 1977
Appressed epiphyte at 2 m. on shrub. Dimorphic.
- [9707 skipped]
- MO, , . 9708 Rub. Coussarea cerroazulensis Dwyer + Hayden
Shrub 4 m. tall. Buds green. det. J. Dwyer, 1975
- MO, 5. 9709 Gesner. Besleria notabilis Morton det. L.E. Skog 1977

142 Feb. 16, 1974

Prov. Veraguas, Panamá

[9709 con] Shrub 1½ m. tall. Flowers bright orange, fruit green.

MO, , , ,

9710 Rub. Psychotria solitudo St. det. J. Dwyer, 1975
Shrub 5 m. tall. Corolla yellow, fruit green.

MO, .

9711 Burser. ? Guarea glabra Vahl
Shrub 2 m. tall. Fruit tan. det. T.D. Pennington, 1979

MO, .

9712 Rub. Psychotria officinalis L. det. J. Dwyer, 1975
Shrub 2 m. tall. Inflorescence turning purple in fruit, corolla tube light purple, lobes white, fruit green.

MO, .

9713 Piper

Shrub 3 m. tall. Spikes hanging.

MO, , .

9714 Eric. Cavendishia axillaris A.C. Smith. det. J. Luteyn, 1975

Epiphytic shrub. Corolla tube yellow-green, lobes white, bracts and fruit pink, fruit turning light blue-purple.

?

9715 Rub.

Shrub 5 m. tall. Buds green, fruit light green.

MO, , , ,

9716 Psychotria uliginosa Sw. det. J. Dwyer, 1975
Shrubs 1-2 m. tall. Fruit bright red.

MO, , .

9717 Anthurium watermaliense det. T. Croat 1978

Terrestrial. Spathe and peduncle dark purple. Spadix green or brown.

MO, .

9718 Anthurium santaféense det. T. Croat 1979

Terrestrial. Petioles to 80 cm. long, spathe green. Spadix white, odorless.

○ Cross section of petiole x1

Feb. 15, 1974

143

Prov. Veraguas, Panamá

- MO, . 9719 *Spathiphyllum allenii* Standl. det. T. Croat, 1975
Terrestrial. Spathe and spadix green when young. Spadix turning white.
- MO, 7. 9720 Hymenophyll. *Trichomanes elegans* L. C. Rich. det. D. B. 1977
Terrestrial. Iridescent blue-green. Kellinger
- MO, 9. 9721 Melastom. *Conostegia oerstediana* Berg.
Tree 10 m. tall. Petals pink in bud, white in anthesis. Stamens yellow. det. R. Liesner, 1975
- MO, , . 9722 Loranth.
Parasitic shrub on # 9721. Fruit orange.
- MO. 9723 *Peperomia ebingeri* Kuncker? det. R. L. 1976
Epiphyte.
- MO, 6. 9724 Eric. *Cavendishia santafeensis* Luteyn, ined
Epiphytic shrub. Bracts pink, corolla white with dark purple tip. Fruit waxy green and white. det. J. Luteyn 1976
- MO, . 9725 orchid.
Epiphyte. Flowers with light purple.
- MO, , . 9726 Gesner. *Columnnea maculata* Morton det. L. E. Skog 1977
Short viny epiphyte, leaves reddish beneath, red-purple toward tip. Corolla yellow with dark purple-brown.
- MO, 7. 9727 *Polypodium subviride* Kellinger
Epiphytic vine. det. D. B. Kellinger 1977
- MO, , . 9728 ~~fern.~~ *Polypodium bolivianum* Rosenst.
Epiphyte. det. H. v. d. Werff, 1983
- US, . 9729 licher. *Sfictac.*
On tree trunk.

Feb. 16, 1975

Prov. Veraguas, Panamá

- MO. 9730 Gurania makoyana (Lem.) Cogn. det. Wunderlin 1975
Vine. Calyx bright orange, Corolla yellow.
- MO. 9731 Lacistema aggregatum (Berg) Rusby det. H. Sleumer 1976
Shrub 2 m. tall. Flowers pale greenish, odorless.
- MO. 9732 Bromel.
Epiphyte. Fruit dark brown.
- MO. 9733 Rub. Ravinia triflora Oerst. var. pittieri (Standl.) Taylor
det. C. Taylor, 1988 Vine (?). Corolla bright red, odorless.
- MO. 9734 Centropogon panamensis Wilbur det. R. L. Wilbur 1976
granulosus Presl ssp. tortilis det. B. Stern, 1987
1/2 m. tall. Flowers pink. Brushy roadside.
- MO. 9735 Comp. Hidalgoa ternata Glave & hex det. R. L. 1976
Herbaceous vine on brushy roadside. Rays bright orange.
- MO, 5. 9736 Gurania coccinea Cogn. det. Wunderlin 1975
Vine trailing over open clay roadside.
Calyx bright orange, Corolla yellow orange.
- MO. 9737 Asclep. Gonolobus ophioglossus det. D. Spellman 1974
Herbaceous vine in brushy roadside. Flowers with somewhat sweet odor but not particularly pleasant. Calyx green. Corolla light green with darker veins, center yellow and orange.
- MO. 9738 Lycianthes howardiana D'Arcy det. W. G. D'Arcy
Vine on clay and into shrubs, brushy roadside. Corolla white, closed (1:00 PM.)
Fruit turning orange. 1991

Feb. 16, 1974

Prov. Veraguas, Panamá

- MO, , , . 9739 *Witheringia*
Shrub 2 m. tall, brushy roadside. Fruit turning bright orange.
- MO. 9740 *Solanum*
Spiny shrub 2 m. tall. Brushy roadside. Corolla blue-purple.
- MO, . 9741 Rub. *Sabicea villosa* HBK. det. J. Dwyer, 1975
Vine in roadside brush. Corolla white.
- MO. 9742 Bromel. *Guzmania sprucei* (Andr.) L. B. Sm.
Epiphyte. det. Utley, 1985
- MO, , , . 9743 *Pothomorphe*
Roadside. To 1.5 m. tall.
- MO, , . 9744 *Monstera obliqua* Mig. det. T. Croat, 1988
Epiphytic vine appressed to trunk of small tree. Spadix bright orange, erect.
- MO, , . 9745 Cucurb. *Elateriopsis verstedii* (Cogn.) Pitt. det. Wunderlin 1975
Vine covering small tree. Flowers green.
- MO, , , . 9746 *Rubus trichomallus* Schltdl. det. R. Liesner, 1975
Arching shrub on brushy roadside. Petals white, young fruit reddish.
- MO, , . 9747 *Scanth.*
Shrubs to 2 m. tall. Corolla red.
- MO, , . 9748 Flacourt *Banara guianensis* Aubl.
Shrub 4 m. tall. Fruit green. det. R. Liesner, 1975
- MO. 9749 orchid.
Epiphyte at 1-2 m. from ground on trunks of shrubs and ~~on~~ vines in area of second growth, common here. Flowers odorless,

Feb. 15, 1974

Prov. Veraguas, Panamá

- petals yellow with light brown spots.
- MO, . 9750 Calathea insignis Petersen
4 m. tall herb with flowering stems to 2 m. tall. Leaves with one purple margin on underside. Inflorescences erect, bracts greenish yellow. Flowers with faint purple tinge. det. H. Kennedy, 1975
- MO, 7. 9751 Piper glabrescens (Miq.) C. DC.
Shrub 2 m. tall. Spikes erect. det. J. Conrad 1975
2. 9752 Peperomia
Vine appressed to shrubs.
- MO. 9753 Xiphidium coeruleum Aubl.
Terrestrial. Berries orange.
- MO, . 9754 Gesner. Drymonia turrialvae Hausskn. det. L. Stog 1977
Terrestrial. Leaves purple beneath. Calyx pink-purple.
- MO, , , . 9755 Melastom. Miconia astroplocarna Donn. Smith. det. Wurdack 1976
1½ m. tall. branch from broken down shrub. Normally reclining? Fruit pinkish.
- MO, , , . 9756 fern. Salpichlaena volubilis (Kaulf.) J. Smith det. D.B. Keilinger 1977
Dimorphic vine, to 3 m. in shrubs.
- MO, , . 9757 Erythrina gibbosa Cufodontis det. D. Neill, 1983
Shrub 5 m. tall, spines on 4 cm. diam. stem. Fruit old, mostly mostly mushy.
- MO, MAD, 18. 9758 Cestrum megalophyllum Dunal det. W. G. D'Arcy 1988
MADw 32571. Shrub 4 m. tall. Fruit green.
- MO. 9759 Sanicula
fruit green.

Feb. 16, 1974

Prov. Veraguas, Panamá

- MO, . 9760 Commelin Campelia zanonia (L.) HBK. det. R.L. 1976
Terrestrial, to 1 m. tall. Petals white. Fruit
dark purple and juicy.
- MO, , . 9761 Pavonia
Herb.
- MO, . 9762 Peperomia distachya (L.) A. Dietr. det. R.L. 1976
Epiphyte. Stems, petioles ^{and} peduncles purple
spotted.
- MO, Z. 9763 Peperomia distachya (L.) A. Dietr. det. R.L. 1976
Vine on stem of shrub. Stems purple above nodes.
- MO, , , . 9764 fern Asplenium auriculatum Sw. det. M. ^{Levinson} Nov 1977
Epiphyte on trunk of leaning shrub.
- MO. 9765 Polypodium Campyloneurum angustifolium (Sw.) Fée
Epiphyte on trunk of leaning ^{var. angustifolium} shrub. det. Delling, 1977
- MO, . 9766 fern Pectuma boliviensis (Rosenst.) M.G. Price
Vine near base of shrub. det. D.L., 1983
- MO, . 9767 fern Polystachyum lineatum (Sw.) J. Smith
Epiphyte on shrub. det. D. Delling, 1977
- MO. 9768 orch.
Epiphyte on shrub. Leaves purplish beneath. Lip
white, other petals green with pale purple tinge.
- MO. 9769 Calathea indecora Woods? det. H. Kennedy, 1975
Herb 2.5 m. tall. Bracts green, flowers pale yellow.
- ~~9770~~ 9770-9772 on trunk of young 7 cm. dbh. Ficus.
- US. 9770 lichen
- US. 9771 Graphid.
- US. 9772 Graphid.

Feb. 15, 1974

Prov. Veraguas, Panamá

- MO, , . 9773 fern. Polypodium giganteum Desv. det. D.B. Lellinger 1977
Vine appressed to small tree, to 2 m.
- MO, , , . 9774 fern. Asplenium guritum Sw. det. D.B. Lellinger 1977
Epiphyte on shrubs.
- MO, 8. 9775 Melastom.
Shrub 5 m. tall. Fruit green.
- MO, . 9776 Cucurb. Frantzia pittieri (Cogn.) Pitt. det. R. Wunderlin
Vine on shrubs at edge of forest. Flowers pale green.
- MO, , . 9777 Hampea appendiculata
Tree 8 m. tall, edge of forest. Fruit brown and green. Another tree of this species in the vicinity (and fruiting more abundantly) was observed by Steve West who noted the Orange billed trogon and yellow eared Toucanet feeding on the fruits. Also observed ~~in~~ feeding in the tree and ~~possibly~~ ^{possibly} on the fruits were the Emerald Tanager, Tropical Parula Warbler, Chestnut sided warbler, white ruffed Manakin, Yellow throated brush tanager, Green Honey-creeper and Speckled Tanager.
- MO, , , . 9778 Laciasis
Arching, to 2 m. Brushy roadside.
- MO. 9779 Bromel. Pitcairnia arcuata (André) André ^{det. J. Wiers, 1992}
Shrubby bank. Inflorescence bracts bright ~~red~~ yellow red-orange and yellow-orange.
- MO, . 9780 Passiflora vitifolia HBK. det. A. Gentry, 1975
Vine, brushy roadside. Flowers bright red.

Feb. 15, 1974

149

Prov. Veraguas, Panamá

- MO, 6. 9781 Passiflora sexflora Juss. det. A. Gentry, 1975
Vine, brushy roadside. Flowers green, greenish
white and purple.
- MO. 9782 Canna tuerckheimii Krantz
Flowers bright orange. det. P. Maas, 1983
- MO. 9783 Passiflora lancearia Must. det. A. Gentry, 1975
Vine in roadside shrubs. Flowers yellowish
green, yellow and purple.
- ~~9784~~

¹⁷
Feb. 16, 1974

- MO, 6. 9784 Dioscorea
Vine on brushy roadside bank. Flowers
~~the~~ odorless, ~~the~~ light purple with greenish
tips to lobes of sepals.
- MO, 12. MEXU. 9785 Dioscorea racemosa (Klotzsch) Uline det. F. Ayala
Vine. Flowers odorless, green and ~~light~~ purple. Fruit green and purple.
^{van. hoffmannii Uline 1976}
- MO. 9786 fern. Grammitis blepharodes (Maxon) Seymour
Epiphyte. det. D.B. Hellinger 1977
- MO, . 9787 Melastom. Blakea foliacea Gleason? det. R. Liesner
Epiphytic shrub. Bracts reddish. 1975
- MO, , . 9788 Bombac. Ceiba rosea (Seem.) K. Schum.
Apparently the tip of a tree or shrub broken
over and mostly ~~buried~~ buried. Very spiny.
Petals red on outside in bud.
- MO, , , . 9789 Gesner. Columnnea hirsutissima Morton det. L.E. Skog 1977
Small shrubby epiphyte. Flowers odorless, corolla red.

Feb. 16, 1974
17

Prov. Veraguas, Panamá

MO, , , .

9790 Piper

Shrub 5 m. tall. Spikes hanging.

MO, 17.

9791 Asclep. matelea viridisdet. D. Spellman
1974Vine trailing over bare clay from
brushy roadside. Latex white. Flowers
odorless, petals with greenish white
and green markings, center yellow-
green and white. Fruit green, to
1.9.5 x 4.7 cm.

MO, .

9792 Centropogon1-m. tall. Corolla bright red orange
with yellow tip.

MO, , .

9793

fern. Polybotrya cerning (L.) Kaulf. det. D.B.
Kellinger 1977
Terrestrial Dimorphic. ! R. Moran, 1985

MO, , , , .

9794

Eric. Psammisia ramiflora Kl. det. R.L. Wilbur 1976Epiphytic shrub 2 m. tall. Calyx and
corolla waxy red, corolla white at tip.
Style dark red at tip, white below.

MO, .

9795

Polypod. Grammitis subsessilis (Hook. & Bak.) Morton
Epiphyte on trunk of small tree. det. D.L., 1983

MO.

9796

Bromel.Fruit bright blue-purple, with clear
watery juice, to 1.3 cm. diam.

MO, .

9797

Solanec. Markea dressleri D'Arcy det. D'ArcyWoody vine. Flowers hanging, not open.
Calyx and corolla green with purple
tinge.

17
Feb. 17, 1974

151

Prov. Veraguas, Panamá

- MO, 10. 9798 Laurac.
Tree 10 m. tall, 15 cm. dbh.
- MO, . 9799 Solanum hayesii Fern.
Unbranched sprout 3 m. tall on brushy roadside. Lower trunk very spiny but no spines ^{here with} these, the first inflorescences. Corolla white, anthers yellow.
- MO. 9800 Bignon. Schlegelia ^{dressleri A. Bentry if fls. white.} nicaraguensis Standl. if fls. purple. Flowers fallen to ground, odorless. Corolla tube cream colored on outside with purple tinge above, lobes pale purple. Darker purple markings on corolla within. Calyx purple, fleshy. det. A. Bentry 1976
- MO. 9801 Peperomia obtusifolia (L.) A. Dietr. det. R. L. 1976
Epiphyte.
- MO. 9802 Hymenophyllum microcarpum Desv. det. D. B. Lelling ¹⁹⁷⁷
- MO. 9803? Solanac. Cestrum
Fruit green.
- MO. 9804 Carpotroche platyptera Pittier ¹⁹⁸⁻ det. H. Steumer.
Shrub 3 m. tall. Fruit orange, born at base of stem.
- MO, , . 9805 Piper
Shrub. Spikes hanging.
- MO, , . 9806 Piper trigonum C. DC. det. J. Conrad, 1975
shrub.
- MO. 9807 Anthurium fatouense Kr. det. T. Croat 1978
Epiphyte from mass of greenish roots. Inflorescence young.

Feb. 17, 1974

Prov. Veraguas, Panamá

- MO, . 9808 Pieramnia Guarea rhopalocarpa Radlk.
Shrub 6 m. tall. Inflorescences from stem.
Buds greenish white. det. T. Pennington
- MO. 9809 Hymenophyllum nigrescens Liebm. det. D.B. Bellinger 1977
epiphyte.
- MO, . 9810 Bromel. Blandfordia insignis (E. Morr.) L.B.Sm. & Pitt.
Epiphyte. Semi-viny. det. J. Utey 1977
- MO, . 9811 ~~Thyrsan.~~ Rub.
Shrub 1½ m. tall. Fruit green with
slight orange tinge, 8 mm. diam.
- MO, 7. 9812 Rub. Hillia ligulifolia Dwyer, det. J. Dwyer, 1974
Epiphytic tree 5 m. tall, stem 15 cm. diam.
Fruit green.
- MO, 10. 9813 Lacistema aggregatum (Berg.) Rusby det. H. Steumer, 198-
Shrub 3 m. tall. Inflorescence yellow-green.
- MO, 9. 9814 fern. Thelypteris lepreurii (Hook.) Tryon var. lepreurii
terrestrial. det. D.B. Bellinger 1977 var. subcuneata
- MO, 5. 9815 Melastom.
Decumbent shrublet.
- MO, 5. 9816 Rub. Psychotria haematocarpa Standl. det. J. Dwyer 1979
Shrubs 1½ m. tall. Fruit orange to red.
- US. 9817 Lichen Stictis.
Green at 1 m. on woody vine.
- US, . 9818 Thelotrema?
At 1-1.5 m. on 15 cm. dbh. tree.
- US, . 9819 Lichen
at 1 m. on 15 cm. dbh. tree.
- MO, . 9820 Rub. Coussarea enneantha Standl. det. C.M. Taylor, 1999
Shrub 4 m. tall. Buds green.

Feb. ¹⁷ 1974

153

Prov. Veraguas, Panama

- MO, , , . 9821 Loranth. Struthanthus subtilis Kuijt
Parasitic shrub on # 9820. Fruit bright
orange. det. M. Merello, 2001
- MO, . 9822 Ouatea
Tree 8 m. tall. Receptacle red, fruit black.
- ? 9823 fern.
Vine to 1 1/2 m. on shrubs. Dimorphic.
- MO, 8. 9824 Rub. Palicourea purpurea C.M. Taylor
Shrub 7 m. tall. Inflorescence pink-
purple. Corolla purplish. det. C.M. Taylor, 1999
- MO. 9825 Cyclanthus bipartitus Poit. !A.J. Hicks 1976
2 m. tall acanthescent herb. Inflorescence nodding.
- MO, 6. 9826 Melastom.
Shrub 4 m. tall. Petals reflexed, very pale.
Stamens and style white.
- MO, , , . 9827 Cephaelis elata Sw. det. J. Dwyer, 1975
Shrub 5 m. tall. Bracts bright red.
- MO, 12. 9828 Loranth. Struthanthus subtilis Kuijt
Parasitic shrub on Cephaelis # 9827. Berries
bright orange. det. J. ~~Kuijt~~ 2 M. Merello, 2001
- MO. 9829 orchid. Epidendrum ellipsophyllum L.O. Wms.
Epiphyte at 1 m. on opening prop roots of
Socratea.
- MO. 9830 Piperac. Peperomia pyramidata Sodiro det. R. Callejas, 19..
aff. tsakiana C.DC.
Epiphyte at 2 m. on shrub. det. R.L. 1976
- MO. 9831 Pharus
Terrestrial.

Feb. 17, 1974

Prov. Veraguas, Panamá

MO, 5.

9832 Siparuna tonduziana Perk. S. conica det. S. Renner, 1996

Shrub 4 m. tall. Leaves aromatic, tickling nasal passages. Flowers light green, fruit turning red. det. R. Liesner, 1982

MO, 4.

9833? Malvaviscus arboreus Cav. var. arboreus
det. B. Turner + Menden Shrub on brushy roadside. Petals bright red.

MO, 11.

9834 Solanum hayesii Fern.

Tree 8 m. tall, 15 cm. dbh. with spines on trunk. Corolla white, anthers yellow, berries green.

MO, , , , .

9835 Verb. Cornutia microcalycina var. pulverulenta n. o. l. d.
Shrub 3 m. tall on brushy roadside. Aromatic. Corolla blue with yellow area at throat

MO, 7.

9836 Laciasis

Arching, to 2.5 m. Brushy roadside.

MO, 8.

9837 Inga pavoniana G. Don det. C. Romero, 2006
Small tree. Fruit green, a few partly opened and seeds removed.

[9838 vacant]

MO.

9839 Loranth. oryctanthusParasitic on Inga # 9637. Berries orange.

MO, , .

9840 Monnina

1 m. tall on brushy roadside. Flowers blue and yellow. Fruit turning dark purple.

MO, 8.

9841 Meliac Ruagea glabra Tr. + Pl. det. T. D. Pennington 1999
Clump of small trees to 8 m. tall (old stump sprouts?). Flowers greenish white, beautifully fragrant. Fruit orange-brown.

17
Feb. ~~16~~, 1974

Prov. Veraguas, Panama

holotype

MO, 66, US, ,

, , .

9842 [*Hibiscus*] *Werckleya grandiflora* Fryxell, sp. nov.

Tree 8 m. tall, 20 cm. dbh., area of older secondary growth. Calyx turning red in fruit.

Petals orange at base, yellow orange at tip. Anthers yellow, stigma velvety deep red-purple. Odorless. J. Arnold Arb. 62: 457-486. 1982. m/1981

MO, .

9843 (*Eupatorium*) *Neomirandea homogama* (Hieron.)

Shrub 2 m. tall, brushy roadside. Flowers pale blue, nearly odorless. det. M. Dillon. Robins. & Brettell

MO, 17.

9844 *Solanum*

Shrub 4 m. tall in brush at edge of forest.

Corolla blue-purple, fruit green.

MO, 7.

9845 *Solanum rugosum*

Shrub 5 m. tall, in brush at edge of forest.

Corolla white, fruit green.

~~9846~~ 9846-9848 Rather stunted ferns on open bulldozed clay along road.

MO.

9846 fern *Gleichenia bifida* (Willd.) Spreng. det. D.B. Kellinger 1977

MO.

9847 fern *Dicranopteris pectinata* (Willd.) Underw. " "

MO.

9848 fern *Gleichenia nitidula* Rosenst. " "

US, .

10170 Graphid.

on trunk of *Solanum hayesii* * 9834.

Feb. 18, 1974

Prov. Veraguas, Panamá

- MO, 4. 9849 *Gram.*
Roadside bank.
- MO, 8. 9850 *Lycianthes howardiana* D'Arcy det. W. G. D'Arcy 1991
Vine on roadside bank. Fruits to 1.6 cm. diam., greenish white, a few turning orange.
- MO. 9851 *Solanum* same species as 9865
Sterile vine trailing out over open bulldozed clay along road. Stems and petioles purple.
- MO. 9852 *Witheringia*
 $\frac{1}{2}$ m. tall. Open clay. Petioles and leaf veins purple. Fruit turning bright orange.
- MO, , . 9853 *Witheringia*
 $\frac{1}{2}$ m. tall, brushy roadside clay. Petals yellowgreen, anthers white, berries turning orange.
- MO, , , . 9854 *Comp. Clibadium pittieri* Greenm. det. R. L. 1976
Bushy shrub $\frac{1}{2}$ m. tall on brushy roadside.
- MO. 9855 *Eric. Spherospermum buxifolium* Poepp. & Endl.
Epiphytic shrublet. Flower buds and new leaves reddish. det. R. Wilbur, 1977
- US, , . 9856 *Cladonia*
On humus accumulation around masses of epiphytes.
- MO, MAD. 9857 *Solanac. Markea*
MADW 32572. Epiphytic shrub with branches $\frac{1}{2}$ m. long, on small tree. Leaves somewhat fleshy. Calyx and corolla light purple and green.

Feb. 18, 1974

157

Prov. Veraguas, Panama F. 9860 hepat
presumably belonging here.

US. 9858 lichen
Epiphyte on branch.

MO, 9859 moss
on log.
9861 - 9863 on branches.

F, , . 9861 hepat.

F. 9862 hepat.

MO, 9863 moss.

MO, 21. 9864 Cestrum

Shrub 3m. tall, brushy roadside. The few flowers light green. Fruit green, obscurely striped with darker green.

MO, , , , 9865 Solanum

Vine trailing over bulldozed clay and in roadside shrubs. Common, but mostly sterile. Same species as # 9851. Leaves never more than obscurely lobed. Flowers just beginning to open, corolla white with purple lobes on outside. Fruits green, to 2.7 cm. diam.

MO, . 9866 ?Erechtites

Herb on open clay along road. Heads light purple.

MO, 9867 Polytrichaceae Pogonatum tortile P. - Beauv.

Open gravelly clay along road.

MO, , , . 9868 aroid. Anthurium scandens (Aubl.) Engl.

Epiphyte. Fruit green. det. T. Croat, 1975

MO. 9869 orchid.

Epiphyte. Flowers odorless. Petals yellowish green with purple stripes.

Feb. 18, 1974

Prov. Veraguas, Panamá

- MO. 9870 *P. panamensis* Schroeder det. M. Grayum, 1994
Peperomia rotundifolia (L.) HBK. det. R. L. 1976
 epiphyte.
- F. 9871 ~~moss.~~ hepat.
 On branches.
- F. 9872 hepat.
 On branches.
- MO, b. 9873 *melastom.* *Topokea calophylla* Almeda
 Small tree. det. F. Almeda, 1982
- MO, 9874 *Eric. Psammisia panamensis* A.C. Smith
 Small epiphytic shrub on trunk of tree. Inflorescence
 bright red. det. Wilbur & Luteyn, 1978.
- F, 8. 9875 ~~hepat~~ *Phyllogonium viscosum* (P.-Beauv.) Mitt.
 festooned on shrubs. det.
- MO, , , 9876 *fern. Pityrogramma calomelanos* (L.) Link.
 Open clay along road. det. D.B. Kellinger 1977
- MO, 9877 *moss. Dicranella hilariiana* (Mont.) Mitt.
 Very common colonizer of bare bulldozed clay
 along road.
- MO, 9878 *moss. Macromitrium*
 on log.
- F. 9879 hepat.
 on soil.
- MO, 9880 *moss. Acroperium*
 on rotten log.
- F. 9881 hepat
 on clay
- 9882-9904 along shady streamlet.
- F. 9882 hepat.
 on rocks.

Feb. 18, 1974

159

Prov. Veraguas, Panamá

- F, , , . 9883 hepat.
clay bank.
- F, . 9884 hepat.
on rocks.
- U.S. 9885 lichen
damp rocks.
- MO, 9886 moss.
on trunks of shrubs.
- MO, 9887 moss.
on rotten log.
- MO, 9888 moss.
on rotting log.
- F. 9889 hepat.
on rotten log.
- F. 9890 hepat.
on rock.
- F. 9891 hepat.
on rotten wood.
- F, . 9892 hepat.
on leaf of terrestrial aroid.
- F. 9893 hepat.
on rotten log.
- F, . 9894 hepat.
base of shrub.
- MO, 9895 moss.
on rocks.
- F. 9896 hepat.
on wood and rocks.

160 Feb. 18, 1974

Prov. Veraguas, Panama

- F, . 9897 ~~moss~~ hepat. Hypopterygium tamariscinum (Hedw.) Brid.
on rocks.
- F, . 9898 ~~moss~~ hepat.
on rock.
- MO, 9899 moss. Glossadelphus truncatulus (C. Mull.) Fleisch.
~~MO.~~ 9900 on rock.
MO. ~~9900~~ moss.
On trunk of shrub.
- F, . 9901 hepat.
on rocks.
- F. 9902 hepat.
on rotten wood.
- MO, , . 9903 Piper biauratum C.D.C. (see also P. polytrichum)
Shrub 1 m. tall. Spikes red, erect. det. J.C.
- F, , . 9904 ~~moss~~ mixed hepat.
on rotten stump.
9905-9910 Roadside clay bank.
- F, . 9905 hepat.
- F. 9906 hepat.
- MO, 9907 moss Dicranella harrisii (C. Mull.) Broth.
9907-a moss
MO, on rotten log.
- F, , . 9908 hepat.
- F, , . 9909 hepat?
- F, , , . 9910 hepat.
- MO. 9911 fern Grammitis serrulata (Sw.)
Epiphyte. det. D.B. Kellinger 1977

Feb. 18, 1974

Prov. Veraguas, Panamá

- MO. 9912 Dieffenbachia
Spathe closed, dark green.
- US, 9913 Usnea
epiphyte.
- F. 9914 hepat.
On shrub.
- MO, 9915 moss.
On trunk of shrub.

- Ca. 17 PMV 95/297
- MO, , , , 9916 Malpigh. Tetrapteris macrocarpa Johnston
Vine in shrubs, brushy roadside along
Quebrada El Nance at the Santiago-Santa Fe
road bridge. 11 km. S of Santa Fe. alt. 220 m.
Wings green. Probably same vine collected
in flower on Nov. 18, 1973 pub #8151.
det. T. Croat

- Ca. 17 PMV 955/238 (or 17 PMV 958/225 ?!)
- check!
know
cometery
MO, 9917-9918 grazed rocky hilltop with low shrubs,
vic. San José on Santiago-Santa Fe highway,
18 km. S of Santa Fe. alt. 400 m.
- MO, 9917 Curatella americana L.
Common small shrub 1-2 m. tall. Flowers
white, beautifully fragrant.
- MO, 9918 Schwenkia americana L.
Mostly in fruit. Corolla purple, stigma green.
Immature fruit with green and purple

Feb. 18, 1974

Prov. Veraguas, Panama

stripes. Coll. here in flower on Nov. 18, 1973, sub # 8172. Very inconspicuous and rarity in part purely because of being overlooked.

17PNV 040/077

MO,

9919

Rub. Tosoqueria latifolia (Rudge) Roem. & Schult.
Shrub 4 m. tall. Corolla white distally, green
at base, lobes white, beautifully fragrant.
Open area along Río Santa María at bridge
of Santiago-Santa Fe Highway. 14 Km. N of
Santiago. alt. 55 m. det. J. Dwyer, 1975

Feb. 20, 1974

63

Canal Zone, Panamá

17PPA 486-7/020-023

9920-9922 Summit Gardens. alt. 80 m.

MO, 5.

9920 Caloncoba gilgiana (Sprengel) Gilg
Cult., spiny shrub 5 m. tall, mostly
leafless. Flowers pointed upwards, lightly
fragrant, petals white. det. J. Miller, 1984

MO, , , , .

9921 Loranth. Dryctanthus occidentalis
Parasitic on # 9920. Petals dark green.
Fruit light green at base, darker above.

MO, + ca. 75.

9922 Bamboo? Bambusa arundinacea (Retz.) Willd.
Cult. Giant woody grass with dense clump
of dark green culms 8-12 cm. diam.,
internodes 8-20 cm. ^{long} ~~short~~ on lower part,
much longer above; mass of mostly
dead small roots in rings of lower
nodes (on those up to 1 m. from ground). No
culm bracts present. Abundantly flowering,
both the high ~~arc~~ arcing culms and the
"skirt" of tangled spiny branches forming
a tangle to 4 m. high at base. The
leafy stems may be from a different
individual; the flowering parts all ~~leaflets~~
leafless, but difficult to separate in the
tangle.

See # 11775 of May 23, 1974 for
culm sheaths collected
off probably this clump.

This is a commonly cult. bamboo in the Garden
and about 10% of the clumps are blooming.
(or more ??)

det. March, 1974 from fragment (spikelets) sent to T.R. Soderstrom
at U.S.

Feb. 21, 1974

Prov. Panamá, Panamá

ca. 617PPV 627/954

MO, .

9923

Plantago major L.

Weed in flower bed along Vía Fernández de Córdoba, Panamá City. Only one seen, possibly cultivated but could just be a weed.
alt. 20 m.

Feb. 23, 1974

165

Prov. Chiriquí, Panamá

ca. 17 PLV 372/765

9924-9948 Lower montane wet forest 5½ km. by road NW
of Alto Quiel, along road toward Cerro Punta.
8 Km. NW of Boquete. alt. 1600 m.

US, 5.

9924 Stictaceae

F.

MO,

9925^a ^{hepat.} On tree branch.
moss. Cyrtobryum minutulum (Hedw.)
On tree branch. Buck & Crum

MO, , .

9926 orchid. Pleurothallis ruscifolia Jacq. R. Br. det. Luer
1978
Canopy epiphyte. Flowers yellow green.

MO, , , .

9927 Solanum

Shrub 5 m. tall. Flowers odorless, petals
white with yellow green midrib, anthers yellow.

MO, , , .

9928 ? Phenax

Shrub 6 m. tall.

MO, , , , .

9929 Loranth.

Parasitic viny shrub in # 9928. Flowers
yellow green, fruit green.

US.

9930 lichen.

on # 9928.

MO, 4.

9931 Piper lanceifolium Kunth det. M. Tebbes, 1989

Shrub 4 m. tall. Twigs green and purple mottled.
Spikes arching.

MO, .

9932 Sanicula

MO, , .

9933 Broussia

Corolla blue with yellow area at throat.

MO, 4.

9934 Drymaria cordata (L.) Willd. det. R. Baker 1975

MO, , , .

9935 Brassicaceae Oreopanax vestitus A.C. Smith

Coarse woody vine in tree. det. J. M. Cannon,
1984

Feb. 23, 1974

Prov. Chiriquí, Panamá

ca. 17 P. L. V. 372/765

- MO. 9936 Archid. Epidendrum trachythere Schltr.
Epiphyte. Flowers light green and purple.
- MO, , , 9937 Polypod. Polypodium myriolepis Christ
Epiphytic vine. det. D.B. Kellinger 1977
- MO, . 9938 Polypod. Pleopeltis macrocarpa var. complanata
Epiphyte. (weath.) Kell. det. D.B. Kellinger 1977
- US, , . 9939 Lichen
on tree branch.
- US, , . 9940 Lichen
on tree branch.
- MO, 4. 9941 Saurauia
Small tree 6 m. tall, 8 cm. dbh. Flowers lightly
fragrant, petals white, anthers yellow.
- MO, , . 9942 fern. Polypodium fraxinifolium Jacq.
Vine climbing tree trunk. det. D.B. Kellinger 1977
- MO, 4. 9943 Monstera
Large tangled vine in tree. ~~Inflorescence~~ Spadix
hanging, dark green.
- MO, , , . 9944 fern.
Covering branch of tree.
- MO. 9945 Anthurium seibertii Croat & Baker det. T. Croat 1979
Epiphyte. Spathe and spadix green and purple.
- MO, . 9946 Bromel. Catopsis wangerinii Mez & Wiercklé
Epiphyte. Fruit green. det. J. H. K. 1977
- MO. 9947 fern. Cochlidium linearifolium (Desv.) Maxon ex C. Chr.
Epiphyte. det. D.B. Kellinger 1977
- MO, 5. 9948 Fuchsia paniculata Lindl. det. P. Raven, 1974
Shrub 4 m. tall. Flowers odorless. Fruit and calyx pink
purple, petals lighter.

Feb. 23, 1974

167

Prov. Chiriquí, Panamá

17PLV 299-³⁰²~~302~~/ 782-6

9949-9979 ~~Lower montane~~ ^{area} ~~low~~ wet forest, Bajo Grande, ca.
~~3 km E~~ of town of Cerro Punta. alt. 2200m.
Recently cleared for pasture and potato farms.

MO, 4.

9949 Begonia convallariodora C.D.C. det. K. Bunt utley
1977
Petals light pink, almost white during anthesis.

MO, 5.

9950 Gnaphalium domingense Lam.

MO, 4.

9951 Uelastm. monochaetum det. R. L. 1976
floribundum (Schltell.) Mayd.
Petals pink, anthers yellow, fruit and calyx
red. det. R. Liesner, 1975

MO, , .

9952 Borag. Cynoglossum amabile Stapf & Drumm.

det. R. Liesner
197-~~9953a~~ Corolla blue, center becoming pinkish blue. Common.

F, , , .

9953a ~~9953a~~ hepat.

Along streamlet. ~~(in 18)~~ F. 2. 9953-6 hepat.

MO,

~~9953~~
~~9954~~ moss.

along streamlet.

US, 5.

9954 Cladonia liche.

on rock.

F, , .

9955 hepat.

on rock.

US.

9956 Cladonia

on rock.

US, , .

9957 Cladonia

on large log.

US, .

9958 Cladonia liche

on log.

US.

9959 Stereocaulon

on rock.

US, , , , .

9960 Cladonia

log.

Feb. 23, 1974

Prov. Chiriquí, Panamá

17PLU 299. ³⁰³~~232~~/782-6

- MO, 9961 Polytrichum juniperinum Hedw.
On grassy, mossy boulder.
- F, 5. 9962 hepat.
On log.
- US, 9. 9963 stictac.
on Tree.
- MO, , , . 9964 Peperomia tetraphylla (L. Forst.) Hook. & Arn.
Epiphyte. Spikes erect. det. R. L. 1976
- 9965 Orchid.
On log.
- US, . 9966 Cladonia
In Polytrichum mat on log.
- US. 9967 Cladonia
On log.
- MO, 9968 Polytrichum
Forming masses on log.
- MO, 4. 9969 Uelastom.
Shrub 1½ m. tall. Common in pasture.
- MO, , , , 9970 Comp. Ageratina aschenborniana (Schauer) King
1 m. tall. On log. det. R. L. 1976 *Robins.
- MO, , . 9970a Orchid.
On large mossy log.

Feb. 24, 1974

169

Prov. Chiriquí, Panamá

17PLV 299-³⁰²~~278~~/782-6

MO, , , ,

, , .

MO, , .

MO, , , .

MO, , .

F.

MO, , , .

MO.

MO.

MO.

17PLV 283-300/785-795

9971 fern. Dryopteris parallelogramma (Kunze) Alston
Terrestrial. Cut rhizomes and petioles
~~are~~ avocado green inside. det. D.B. Lellinger ¹⁹⁷⁷

9972 fern. Pityrogramma
Fronds bright silvery beneath.

9973 Fuchsia paniculata Lindl.
Shrub. Whole inflorescence pink-purple, young
fruit darker purple. det. P. Raven, 1975

9974 Monnina
Shrub. Flowers blue and yellow. Young
fruit green.

9975 Anthocent.
In mossy mat on rock.

9976 fern. Grammitis anfractuosa (Kunze) Proctor
In mossy mat on rock. det. D.B. Lellinger 1977

9977 Rub.
Creeping ~~the~~ along in mossy mat on rock.
Flowers green, anthers yellowish to brown.
Fruit red-orange.

9978 ? Pilea
In mossy mat on rock. Flowers white.

9979 Peperomia tenellaeformis Trel. ? P. chiriquiensis
Yunk.
In mossy mat on rock. det. R.L. 1976 det.
R. Callejas, 19..

9980-10069 Roadides, pastures and remnants of
~~lower montane~~ wet forest, Bajo Grande, 1-3
km. E of town of Cerro Punta. 2000-2200 m.

Feb. 24, 1974

Prov. Chiriquí, Panamá

17PLV 283-300/785-795

- MO. 9980 Begonia involucrata Liebm. det. R. Burt-Utley 1976
Petals white, anthers yellow.
- MO, , , . 9981 Browallia
Flowers blue with white spot at throat.
- MO, , , . 9982 Solanum
Shrub. $1\frac{1}{2}$ m. tall. Corolla white, anthers orange, fruit green.
- MO, , . 9983 Clebadium leiocarpum Steetz in Seem. det. R. L. 1976
Shrub 2 m. tall. Flowers white, anthers black. Heads turning dark ~~green~~ green and juicy.
- MO. 9984 Amargyllid. Tritonia crocosmiflora Nichols det. R. Liesner, 1975
Flowers bright orange and yellow-orange.
- MO, 4. 9985 Castilleja arvensis Schlecht. & Cham. det. Holmgren 1975
Bracts bright red.
- MO, , , . 9986 Comp. Baccharis trinervis Pers. det. R. L. 1976
Viny. Flowers greenish white with light pungent odor.
- MO, 4. 9987 Lourecera japonica Thunb. det. R. Liesner, 1981
Vine. Flowers fragrant, pink and white, fading to cream.
- MO, , . 9988 Polygonac. Muehlenbeckia tamnifolia (HBK.) Meisn.
Vine. Flowers and fruit green. det. J. Brandbyge, 1988
- MO. 9989 Convolv. Ipomoea batatas (L.) Lam. det. D. Austin, 1974
Vine. Corolla odorless, pink purple darker within.
- MO, , , . 9990 Comp. Liabum megacephalum Sch.-Bip. det. R. L. 1976
Semi-viny herb. Heads yellow, $\pm$ odorless.
- MO. 9991 Caryoph. Areparia lanuginosa (Michx.) Rohrb.
Flowers white. det. R. L. 1978

Feb. 24, 1974

171

Prov. Chiriquí, Panama

17 PLV 283-300 / 785-795

MO, 6.

~~not Icacinaceae~~
9992 ~~Hacourt?~~ Perrottetia multiflora Lundell, ~~rel~~ ^{aff.}
Shrub 5 m. tall. Flowers green, odorless.
Fruit red and green. det. Lundell, 1985

MO, 4.

9993 Duranta
weak shrub with arching branches. Flowers
blue, fragrant. Fruit turning light orange.

MO, .

9994 Ceranium guatemalense Knuth
Flowers light purple. R.L., 1982

MO, , , .

9995 ~~Ageratum~~ Fleischmannia chiriquensis King & Robins.
Shrubby, to 2 m. Flowers blue purple,
lightly fragrant. det. R.L. 1976

MO, 9.

9996 Saurauia
Clump of many sprouts from stump, to
5 m. tall, 10 cm. diam. Flowers sweetly
fragrant, petals white, anthers yellow.

MO, .

9997 Rub. Gonzalegunia rosea Standl. det. J. Dwyer,
Slender shrub 3 m. tall. Flowers pink. 1975

MO, 6.

9998 Verb. Lippia torresii Standl. det. R. Liesner, 1975
Tree 12 m. tall. Corolla either yellow or
greenish with very faint if any odor.

MO, ~~2~~, 46, US, , ,

9999 [Hibiscus] wercklea woodsonii (A. Robyns) Fryx.
Tree 8 m. tall, 20 cm. diam., in full
fruit, capsules erect.

MO, , , , ,

10000 Solanum nudum Dunal det. W.G. D'Arcy, 1975
Shrub 2 m. tall. Corolla white with
purple tips to lobes.

MO, , , .

10001 Oxalis vulcanicola Donn.Sm. det. R. Liesner, 1975
Stems and undersides of leaves reddish. Petals

Feb. 24, 1974

Prov. Chiriquí, Panamá

17 17PLU 283-300/785-95

- yellow orange with red stripes on outside, bright yellow within.
- MO, , . 10002 Verbena litoralis HBK. det. R. Liesner, 1974
2 m. tall. Flowers blue, odorless.
- MO. 10003 Solanum
Viny, no tubers. Corolla white, with purple on the midribs outside.
- MO, , , . 10004 Brugmansia
Common cultivated shrub. 3 m. tall.
"floripondio". Flowers hanging, first light green, becoming white.
- MO, , . 10005 Cucurb. Frankia pittieri (Cogn.) Pittier. det. R. Wunderlin
Vine in Brugmansia hedge. Not cultivated, called "chayotillo" and not eaten. Flowers green, fruit green with lighter spots, rind hard.
- MO, , , . 10006 Struthanthus
Dense vine enveloping 5 m. tall Brugmansia.
Flowers green, odorless.
- MO, , . 10007 Polypod. Pleopeltis macrocarpa var. complanata (Weath.) Lettinger
On trunk of 5 m. tall Brugmansia. Fronds shriveled. det. D.B. Lettinger 1977
- MO, . 10008 fern. Blechnum christii C. Chr. det. D.B. Lettinger 1977.
Terrestrial. Dimorphic.
- MO, , , . 10009 ~~Cornus~~ ? Viburnum costaricanum (Pierst.) Hemsl.
Shrub 7 m. tall. Fruit green. det. M. Donoghue, 1982
- MO, , , . 10010 Fuchsia microphylla ssp. hemsleyana det. P. Raven
Arching shrub 1 m. tall. Flowers dark pink, fruit dark purple.
- MO, , , . 10011 fern. Blechnum occidentale f. occidentale Rosenst. det. D.B. Lettinger 1977
Terrestrial.

Feb. 24, 1974

173

Prov. Chiriquí, Panamá

17PLV 283-300/ 785-95

det. R. Liesner, 197-

- MO, , , . 10012 Aral. Oreopanax vestitum A.C.Sm., vel aff.
Large weak stemmed shrub. Fruit green.
- MO, . 10013 Smilacina paniculata M. Martens + Gal.
Petals white, ovary light purple. det. R. Liesner, 1975
- MO, , , . 10014 Gesner. Alloplectus ichthyoderma Hanst.
Terrestrial, 1/2 m. tall. Calyx green. det. L.E. Skog 1977
- MO. 10015 Peperomia palmana C.DC. ? det. R.L. 1976
On log.
- MO. 10016 Solanum
On log. Corolla white with greenish purple center,
anthers yellow orange. Fruit green.
- MO, 8. 10017 Asplenium auritum Sw.
On log. det. D.B. Kellinger 1977
- MO, , , . 10018 Polypod. Campyloneurum angustifolium (Sw.) Fée
On log. det. D.B. Kellinger 1977
- F. 10019 hepatic.
On log.
- MO, , . 10020 Amaryllid? Iridac.? Sisyrinchium convolutum Nacca.
Flowers yellow. det. C. Hamilton, 1982
- MO, , . 10021 Gnaphalium americana Mill. det. R.L. 1976
- MO, , . 10022 Salvia
1 m. tall. Aromatic. Flowers light purple and white.
- MO, 5. 10023 Gnaphalium attenuatum DC. det. R.L. 1976
- MO. 10024 Equisetum bogotense HBK. det. D.B. Kellinger 1977
rhizome
"cola de caballo" This and a fern ()
used ~~for~~ locally for "cancer" and "cleaning
the stomach."

Feb. 24, 1974

Prov. Chiriqui, Panamá

17PLV 283-300/785-95

det. R. L. 1976

- MO, . 10025 *Comp. Cirsium subcoriaceum* (Less.) Schult.-Bip.
to 2 m. tall. Heads nodding, probed by
hummingbirds, flowers white, inner
involucral bracts orange.
- MO, . 10026 moss *Ceratodon purpureus* ssp. *stenocarpus*
on gravelly soil. (B.S.G.) Dixon
det. R. L. 1976
- MO, . 10027 *Eric. Macteania rupestris* (HBK) A.C. Smith
Small shrub on bank. Flowers red,
light pink at tip. det. R. L. Wilbur 1976
- MO. 10028 *Orchid. Derstedella exasperata* (Reichb. f.)
on bank. Fruit green. Hagsater
- MO, . 10029 *Orchid. Epidendrum radicans* Lindl.
on bank. Flowers bright red and orange.
- MO, . 10030 *Rub. Relbunium hypocarpium* (L.) Hemsl.
Creeping. Fruit orange. det. J. Dwyer 1978
- MO. 10031 *Trifolium repens* L.
Flowers white or pale pink.
- MO, . 10032 *Trifolium dubium* Sibth.
Flowers yellow. det. R. L. 1975
- MO, . 10033 (*Rapanea*) *Myrsine coriacea* (Sw.) R. & S. det. J. Pipoly, 1984.
Tree 6 m. tall, 12 cm. dbh. Flowers green
and purplish, anthers dull orange.
- MO, . 10034 *Hydrocotyle*
Flowers and fruit green.
- MO, . 10035 *Rub. Crusea coccinea* DC. var. *chiriquiensis* Anderson.
Trailing herb. Flowers bright purple. det. J. Dwyer 1977
- MO, . 10036 *Eric. Sphynospermum majus* Griseb. det. R. L. Wilbur 1976
Shrublet on log. Flowers pink, fruit green.

Feb. 24, 1974

175

Prov. Chiriquí, Panamá
17 PLV 283-300/785-95

- MO. 10037 Anthurium scandens (Aubl.) Engl.
On log. Spathe green with pale purple stripes.
Spadix green or purple. det. T. Croat, 1975
- MO, , , . 10038 Solanum
Scrambling herb 1 m. high, stems to 3 m. long,
no tubers. Corolla white with purple green
midrib, fruit light and dark green marked.
- MO, 4. 10039 Phyllanthus
- MO. 10040 Acanth. Dicliptera iopus Lindau
Corolla purple. det. L. Purkee, 1977
- US, . 10041 Stictac.
On trunk of shrub.
- ~~10042~~ 10042-10044 On twigs of small shrub.
- US. 10042 Lichen
- US, . 10043 Lichen
- US. 10044 Lichen
- F, , . 10045 Anthocerot.
On dirt of bank.
- MO, , . 10046 Comp. Galinsoga urticaefolia (HBK.) Benth. det. R. L. 1976
Sprawling herb. Rays pale purple, disc yellow.
- MO, . 10047 Melastom.
Tree 6 m. tall. Calyx bright red with greenish
tips to lobes.
- 10048 - 10049 Branch of small tree. + 10171
- MO. 10048 Peperomia quadrifolia (L.) HBK. det. R. L. 1976.
- MO, . 10049 Peperomia sp.
- MO. 10171 Peperomia tenellaeformis Trel.
det. R. L. 1976

176 Feb. 24, 1974

Prov. Chiriquí, Panamá

17PLV 283-300/785-95

- MO, . 10050 ~~Peperomia~~ Peperomia palmana C. DC. det. R. L. 1976
Crotch of tree. Leaves marked with red beneath.
- MO. 10051 Peperomia acuminata R. & P. det. R. L. 1976
On log. Peduncle purple. Leaves pale greenish white below.
- MO. 10052 Peperomia galioides HBK.
On Log. det. R. L. 1976
- MO, , . 10053 Arac. Oreopanax aff. versstedianum Marchal det. R. Liemert, 1974
Tree 8 m. tall. Fruit light green.
- US. 10054 lichen
On small branch.
- MO, . 10055 Eric. Satyria warszewiczii Klotzsch, det. Wilbur Kuteyn, 1978.
Shrub 5 m. tall. Pedicels red, fruit green with reddish tinge.
- MO, , . 10056 Parathesis
Shrub 5 m. tall. Fruit reddish.
- MO, 10057 moss Sematophyllum swartzii (Schwaegr.) Welch
On log. Caribaeohypnum polypetrum (Mitt.) Ando + Grun Higuchi
- MO, . 10058 Saurauia
Clump of shrubs 4 m. tall, probably stump sprouts. Flowers sweetly fragrant, petals white, stamens yellow.
- MO, 17. 10059 Cestrum aff. rugulosum Francy det. W. G. D'Arcy, 1975
Shrub 3 m. tall. Flowers green and purple. Fruit green to yellow green, truncate at tip.
- US, 6. 10060 Peltigera
on log.
- US, . 10061 Cladonia
on log. Apothecia bright red.

Feb. 24, 1974

77

Prov. Chiriquí, Panamá

17P4V 283-300/785-95

MO, .

10062

Scroph. Leucocarpus perfoliatus (HBK.) Benth.
Herb. Fruits white.

MO, .

10063

Centropogon
♂ Corolla bright orange red at base, yellow at tip.

MO, , , .

10064

Flacourt? Perrottetia multiflora Lundell, relaff.
Shrub 6 m. tall. Flowers yellowgreen, with faint pungent odor. "not Icacinaceae" det. Lundell, 1985

MO, , , , .

10065

Monstera
Large robust vine in tree. Spathe green on outside, cream within during anthesis. Spadix whitish green in anthesis, with faint musty odor like tulips, later turning green.

MO, .

10066

Bromel.
Epiphyte. Inflorescence green.

MO, , , .

10067

♀ Myrsin. Auricularia rufa (Lundell) Lundell
Shrub 4 ½ m. tall, a clump of ~~stems~~ stump sprouts.
Fruit green. det. Lundell, 1984.

U.S.

10068

Usnea
Epiphyte on upper branches.

MO, , , , .

10069

Solanum
Shrub 2 m. tall. Corolla white with green midrib, anthers yellow orange.
(FF) color slides

Feb. 24, 1974

Prov. Chiriquí, Panamá

ca. 17PLV 212/726

MO, , , .

- 10070 Verb. Lippia oxyphyllaria (Donn.Sm.) Handl.
Shrub 1½ m. tall. Flowers yellow or yellowish
white. Dry grassy flats 3 km. NE of El Hato
del Volcán along road to Bambito and Cero
Punta. alt. 1500 m. det. R. Liesner, 1975

ca. 17PLV 211/613

10071-~~10073~~
~~10073~~

- 2 km. N of Cuesta de Piedra (9 km. S of El Hato
del Volcán) on road to El Hato del Volcán.
alt. ~~1000~~ 1075 m.

MO, , , .

- 10071 Inga minutula (Schery) Elias vel sp. aff. det. R. L. 1975
Shade tree in small coffee grove. 10 m. tall,
with spreading crown. "guava", fruit eaten.

MO, , , .

- 10072 Loranth. Struthanthus quercicola (C. & S.) Blume det. J. Kuijt 1977
Bushy vine with pendant branches 1½ m.
long in Inga #10071. Flowers green, odorless.

MO.

- 10073 Hypericum gridioides Seem. det. R. L. 1977
~~In low~~ In short grass of gravelly roadside.

17PLV 211/ca. 597-8

- 10074-10097 Epiphytes on living fence post trees. N side
of Cuesta de Piedra, 10 km. S of El Hato del Volcán, on
alt. 1040 m. road to Concepción.

MO, , .

- 10074 fern. Niphidium crassifolium (L.) Kell. det. D. B. Kellinger 1977
Forming large mass.

MO, .

- 10075 fern. Campyloneurum angustifolium (Sw.) Fée det. D. B. Kellinger 1977

MO.

- 10076 Lycopodium
sterile.

Feb. 24, 1974

Prov. Chiriquí, Panama

17 PLV 211 / ca. 597-8

det. D. B. Kellinger 1977

MO, , . 10077 Polypodium polypodioides var. aciculare Weath.
Vine tenaciously appressed to trunks. Mostly curled up.

MO. 10078 Peperomia glabella (Sw.) A. Dietr. ^{det. R. L. 1976}
Nerves of leaves red on underside.

MO, 10079 moss. Groutiella chimborazense (Mitt.) Flor.

F, , . 10080 hepat.

US, , , , . 10081 Parmelia

F, 5. 10082 hepat

MO, 10083 moss.

festoons hanging off branches.

F, , . 10084 hepat.

F, . 10085 " "

F. 10086 " "

F, . 10087 " "

US. 10088 lichen

US. 10089 " "

US. 10090 " "

US. 10091 " "

US, . 10092 lichen

Restricted to the Phyllanthus ?

US, , . 10093 Usnea

US, , , , . 10094 Ramalina

US, . 10095 lichen.

US, . 10096 " "

US, 6. 10097 " "

MO, , . 10100 Rhynchelytrum

Roadside grass. Characteristic cloying sweet odor.

Feb. 25, 1974

Prov. Chiriquí, Panamá

17PMV 108/082

10098-10099 Cultivated in yard with *Cocos nucifera*,
Corozopalm, *Guanábana* etc. E edge of
 Remedios. alt. 20 m.

MO, , .

10098 *Bustavia superba*

"brembillo" Tree 8 m. tall, 15 cm. dbh. All had
 been cut down in this yard except this one
 in the fencerow. Flowers ^{growing on branches, mainly below} fragrant. Petals ^{the} ^{leave}
 pale yellowgreen on outside where exposed
 in bud, otherwise white with rose purple
 spots, especially outside. Stamen ring yellow,
 filaments yellow at base, rose purple at
 tip, anthers yellow. Ovary disc, calycine
 ring and distal half of expanded pedicel
 yellow, ovary disc then turning yellow
 after petals fall. The yellow inside of
 the fruit eaten, said to be ripe in
 October. Tree ant infested. Another local
 states that it ~~is common~~ ^{can be found wild} in the area on
 the ranches where complete clearing (such
 as occurs around Remedios) has not occurred.

MO, .

10099 *Bignom. Pachyptera hymenaea* (DC.) A. Gentry
 Woody vine with 3 cm. diam. stem but
 kept trimmed so like a small bush. Crushed
 leaves with strong peculiar odor like that
 of certain meats or bologna. Used to
 give a special flavor to meals.
 det. A. Gentry

Feb. 25, 1974

10100 filled 181
seep. 179

Prov. Chiriquí, Panamá

17 PMV 100-101/092-4

10101-10118 Fencerow of living fence post trees, old
cleared pastures along old road, 1 km. E
of Remedios. alt. 15 m.

MO, , . 10101 Peperomia cyclophylla Mig. det. R. L. 1976
Epiphyte on trunk of tree.

MO. 10102 Polypodium polypodioides (L.) Watt. var. polypodioides
On trunk of tree. det. D. B. Hellinger 1977

MO, , . 10103 Bromel. Tillandsia balbisiana Schult.
Epiphyte. det. J. Utley 1977

MO, , . 10104 Anthurium
Acaulescent, from mass of roots in
crotch of tree. Spathe green; spadix green,
turning purple, the largest 3.2 x 17 cm.

MO, , . 10105 ~~Bumelia~~ Spondias mombin L.
7 m. tall, 35 cm. dbh. tree. "jobo de puerco"
pigs said to relish the fallen fruits.

MO, 7. 10106 Struthanthus orbicularis (HBK.) Blume
Vine hanging in # 10105. Flowers yellow green,
fragrant.

MO, , . 10107 Erythrina berteriana Urban
"pito" Leafless living fencepost 7 m. tall.
Flowers red. det. J. Dwyer, 1980

MO, , . 10108 Struthanthus orbicularis (HBK.) Blume det. T. Croat
1974
Vine in # 10107. Flowers yellow green.

MO, , . 10109 Orchid. Epidendrum chlorocorymbos Schltr.
Epiphyte. Flowers yellow green.

MO, , . 10110 Cactus Hylocereus polyrhizus (Web.) Br. & Rozp
Vine to 4 m. det. H. Bravo & R. Schein var. 1985.
A new species from old notebook.

Feb. 25, 1974

Prov. Chiriquí, Panamá

17PMU 100-101/092-4

MO, .

10111

~~Bursera~~? *Spondias mombin* L.

Tree 8 m. tall, 30 cm. dbh. Flowers white.

Galls green, with a little worm.

MO, 10.

10112

Loranth. *Phthirusa*Parasitic shrub 1 m. tall on 2.5 cm. diam. ~~branch~~ branch of # 10111. Flowers purple, fruit green.

MO, , .

10113

~~Bursera~~? *Spondias mombin* L.

Tree 7 m. tall, 20 cm. dbh. Flowers white.

MO, 8.

10114

Phoradendron quadrangulare (HBK) K. & U. det. Kuijt 1976Bushy parasitic shrub ~~0.75 m.~~ 0.75 m. tall. whole plant dark green. On # 10113.

MO, .

10115

? *Spondias purpurea* L.

sterile tree 5 m. tall, 15 cm. diam.

MO, 4.

10116

Loranth. *Phthirusa pyriformis* (HBK) Eichl. det. Kuijt 1976

Parasitic shrub 1 m. tall, in # 10115. Fruit green.

MO, 5.

10117

Loranth. *Phoradendron quadrangulare* (HBK) K. & U.Parasitic ^{shrub} $\frac{1}{2}$ m. tall, in # 10115. whole plant light, almost yellow green. det. Kuijt 1976

MO, .

10118

Orchid.

Epiphyte. Lip purple and white. Other petals green and purple, later turning yellow and purple.

17PMU 105/102

10119-10124

Roadside trees in old cleared pastureland, 2 km. NE of Remedios. alt. 15 m.

MO, , , .

10119

Guazuma ulmifolia Lam. det. R. Liernur, 1975

Tree 10 m. tall, 30 cm. dbh.

Feb. 25, 1974

83

Prov. Chiriquí, Panamá

17PMV 105/102

MO, 6.

10120 Loranth. Struthanthus

Vine, ± covering canopy and festooned in # 10119. Flowers yellow green, lightly fragrant.

MO, 4.

10121 Loranth. Dryctanthus spicatus

Small parasitic bush in # 10119. Petals dull orange, fruit green.

MO, , .

10122 Loranth. Phthirusa

Small parasitic shrub on # 10119. Petals dark red, fruit green with yellow tip.

MO, , , .

10123 Anacardium

Tree 7 m. tall, 25 cm. diam. This species seems to be relatively free of Loranthaceae here. Flowers fragrant, petals first pale green, then red.

MO, 5.

10124 Legum. Gliricidia sepium (Jacq.) Steud. det. J. Dwyer

Slender leafless living fence post, commonly used for this purpose here. Flowers pink with yellowgreen area at base of standard. Fruit green.

Provincia de Veraguas

17PMV ~~480~~ 480-2/079-081

10125-10152, Heavily grazed rocky hills, much ^{of it} brushy with
10173 Curatella americana common. Near tower on

top of Cerro San Cristobal. alt. 500 m. Near Pan Am Hwy, 9½ km (straight) W of bridge over Río Cobre.

MO, , , , .

10125 Hyptis

35 cm. tall. Upper corolla lip blue, lower lip pale blue.

184 Feb. 25, 1974

Prov. Veraguas, Panamá

17PMV 480-2/079-081

- MO. 10126 Hyptis
Probably a ~~stunted~~ ^{stunted} form of #10125. ^{corolla} Upper lip blue, lower lip light blue.
- MO, , . 10127 Piper aduncum L. det. J.C. 1974
Shrub 2 m. tall. Spikes erect or arching erect.
- MO, , . 10128 Aristida
- MO, , . 10129 Comp. Centratherum punctatum Cass.
Flowers purple. det. J. Strother, 1986
- MO, . 10130 Malv. Peltaea trinervis (Presl) Krap. & Crist. ^{det. P. Fryxell 1977}
1 m. tall, decumbent at base.
- MO, , . 10130 Rhynchanthera
Shrubs 1 m. tall, foliage viscid. Flowers purple.
- MO, , . 10132 Malv. Sida glutinosa Commers. ex Car. ^{det. P. Fryxell 1975}
Petals dull yellow, anthers bright yellow, capitate stigma bright red.
- MO, 6. 10133 Vernonia patens HBK. det. R.L. 1976
Shrub 1½ m. tall. Flowers white, lightly fragrant, anthers pale purple.
- MO. 10134 Ptyrogramma calomelanos (L.) Link var. calomelanos
On bank. det. D.B. Kellinger 1977
- MO, . 10135 Clitoria
Tiny vine. Flowers purple.
- MO. 10136 Rub. Declieuxia fruticosa
Flowers white. det. J. Dwyer 1976
- MO, , . 10137 Curatella americana L.
Abundant. Gnarled shrub 3 m. tall with flaky gray bark.

Feb. 25, 1974

185

Prox Veraguas, Panamá

17 PMV 480-2 / 079-081

MO, , , . 10138

Davilla

Shrubby vine 1 m. tall. Petals and anthers yellow in bud.

MO, , . 10139

Hyptis

MO, , . 10140

Comp. Calea prunifolia HBK.

Shrub 1 m. tall. det. M. Dillon, 1983

MO, , , . 10141

~~Comp.~~ Waltheria glomerata Presl det. R. Liemer, 197-

Shrub 1½ m. tall, petals white, anthers yellow.

MO, , , , . 10142

Clusia minor L. (= C. pratensis Seem. (apomictic))

Bushy tree 5 m. tall. Common. Milky latex abundant in fruit. Immature fruit green and reddish, seeds green, surrounded by bright orange aril. det. B. Hammel, 1984

MO, , . 10143

Sapind

Woody vine in small tree.

MO. 10144

Clusia minor L. = C. pratensis Seem. (apomictic)

Shrub 3 m. tall with milky sap. Buds pink and white. Petals pink. det. B. Hammel, 1984

MO, . 10145

Comp. Trixis inula Crantz det. M. Dillon, 1983

Small shrub. Flowers yellow.

MO, 13. 10146

(Rapanea) Myrsine pellucidopunctata Oerst. det. J.J. Pipoly, 1984

Tree 9 m. tall, 25 cm. dbh. Fruit green, turning purple. sec # 10199-10203 for lichens collected on this tree

MO, , . 10147

Genipa americana L. det. J. Dwyer

Shrub 4 m. tall, mostly leafless. Fruit dirty green, mostly held erect.

MO, , . 10148

Struthanthus orbicularis (HBK.) Blume det. T. Croat 1974

Vine covering 3 m. tall Curatella americana. Flowers

Feb. 25, 1974

Prov. Veraguas, Panamá

17PMV 480-2/079-81

- MO, 18. 10149 *Phoradendron piperoides* (HBK.) Trcl. det. Kuijt 1976
with light pungent fragrance, yellowgreen
Small parasitic shrub on *Curatella*
Americana # 10173. Fruit orange.
- MO, . 10173 *Curatella americana* L.
Shrub.
- MO, 6. 10150 *Roupala montana* Aubl. det. R. Liesner, ¹⁹⁸⁸
Tree 15 cm. diam., 7 m. tall. Leaves dimorphic.
Young fruit green.
- MO, , , . 10151 *Dicranopteris flexuosa* (Schrad.) Underw.
Forming a loose patch 1 m. tall, climbing
into trees where available. det. D.B. Kellinger 1977
- MO. 10152 *Ageratum Fleischmannia pratensis* (Klatt) K. & R.
Flowers blue. det. R. Liesner 1976

17PMV ~~476~~ 486/076

- 10153-10169 Grazed brushy rocky roadside along road to radio
tower on Cerro San Cristobal, near Pan Am. Hwy, 9 km
(straight) W of bridge over Río Cobre. alt. 450 m.
- MO, 6. 10153 *Verb. Lippia oxyphylla* (Donn. Sm.) Standl.
Shrub 3 m. tall. Flowers either bright or light
yellow. det. R. Liesner, 1975
- MO. 10154 *Contoubea spicata* Aubl. det. R. L. 1977
Fruit green.
- MO, , , , 10155 *Solanum* & *Torrum*.
Shrub 1½ m. tall. Corolla white, fruit green.
- MO, , . 10156 *Vernonia canescens* HBK. det. R. L. 1976
Shrub 1½ m. tall. Flowers white

Feb. 25, 1974

10170 filled
see p. 155
10171 filled. see p. 175
~~# 10172~~

187

Prov. Veraguas, Panamá
17 PMU 486/076

- MO, , . 10157 Vismia panamensis Duchassaing & Walp. det. N. Robson, 1978
Shrub 4 m. tall. Buds rusty, with orange latex.
- MO, , . 10158 Laciaris
2 m. tall. Spikelets turning black.
- MO, , . 10159 Melastom.
Shrub 3 m. tall. Inflorescence (buds only) rusty. Leaves curled.
- MO. 10160 Helicteres guazumifolia HBK. det. R. Liemert, 197-
Shrub 2 m. tall. Flowers bright red.
- MO, . 10161 Andropogon
- MO, , , . 10162 Scleria bracteata Cav. det. G. Davidse, 1975
Patch. Leaf edges cutting.
- MO, . 10163 Paspalum
- MO, 9. 10164 Malv. Sida glutinosa det. Fryxell
Decumbent, 1/2 m. tall. Petals dull orange.
- MO, . 10165 Comp. Elephantopus angustifolius Sw. det. R. L. 1976
- MO. 10166 Melochia villosa (Mill.) Fawc. & Rendle
Flowers light purple. det. R. L. 1979
- MO, , . 10167 Scoparia dulcis L. ! R. L. 1974
- MO, 11. 10168 Laurac. Persea caerulea (R. & P.) Mez.
Tree 7 m. tall, 15 cm. dbh. Flowers yellow green, closed when collected at 6:00 P.M., opening late the next day in the plastic bag. det. L. R. Holdridge 1977.
- MO. 10169 ~~Chlorom~~ Chamaesyce hirta (L.) Millsp.
det. R. L. 1976

Feb. ~~23~~²⁶, 1974

#10173 filled, see p. 186

Canal Zone, Panamá

17PPA 423/079

MO, 7.

- 10172 Lantana hippia alba (Mill.) N.E. Brown
 Bushy shrub $1\frac{1}{2}$ m. tall with weak arching
 branches. Gravelly waste place, Dredging
 Division, Gamboa. alt. 30 m. Foliage with
 minty odor like certain Mentha or Salvia
officinalis. Corolla light purple, throat
 first yellow^{and} then purple. det. R. Liesner, 1975

Feb. 27, 1974

189

Canal Zone, Panamá

17 PPV 547-8/948-950

10174-10181 Scattered trees ^{roadside,} vicinity of Miraflores Locks.
alt. 5 m.

MO, 5.

10174 Buazuma ulmifolia Lam.

Small tree 10 m. tall. Flowers yellow green.

MO, 15.

10175 Oryctanthus spicatus ~~HBK.~~ ^{alveolatus (HBK.) Kuijt}

Parasitic shrub on # 10174. Sepals dark red. Fruit green with purple stripes.

MO.

10176 ~~Buazuma?~~ Spondias

Tree 1 m. dbh, 15 m. tall. Leafless with a few inflorescences coming out.

MO, 16.

10177 Phoradendron quadrangulare (HBK.) K. & H. det. Kuijt 1976

Common bushy parasitic shrub to 1 m.

diam. on # 10176. Whole plant green.

Fruit yellow green, berries sticky within.

MO, , .

10178 Luehea

Sterile stump sprouts 7 m. tall.

MO, 16.

10179 Oryctanthus spicatus

Parasitic shrub in # 10178, bushy with sprawling stems to 1 m. long. Sepals dark red. Fruit green with purple stripes.

MO, , .

10180 Ficus insipida Willd. det. B. de Morillo

Buttressed tree 12 m. tall with copious milky sap. Figs hard, green with confluent light green spots. Flower layer ~~pink~~ dark pink.

MO, 7.

10181 Inga pauciflora W. & D. det. R. L. 1975

Tree 8 m. tall, 20 cm. dbh. Flowers

faintly fragrant, expanded at 5:00 PM. Filaments white.

Feb. 27, 1974

Canal Zone, Panama

17PPV 586/902

10182-10185

Balboa. alt. 5 m.

MO, 3.

10182

Pithecolobium saman (Jacq.) Benth.

Large cult. tree with wide-spreading crown.
Leaves folding at night. Calyx green, corolla
pink with green tips. Fruit green, turning dark
brown.

MO, 1.

10183

~~(Struthanthus)~~ Phthirusa stelis (L.) Kuijt det. J. Kuijt, 1993

Parasitic shrub with viny branches, in
10182. Flowers white, odorless.

MO, .

10184

~~Cupressus~~ Flujia orientalis L. det. R. Liesner,

Cult. tree 8 m. tall, 25 cm. dbh. 1987

MO, .

10185

~~Struthanthus~~ Phthirusa stelis (L.) Kuijt det. J. Kuijt, 1993

Parasitic viny shrub in # 10184. Flower
buds light green.

Feb. 28, 1974

Canal Zone, Panamá

17PPV 595/912

MO, 12.

10186 Ficus benjamina det. C.C. Berg, 1982

Cultivated tree, Ancón, alt. 6 m.

10-m. tall, ca. 1 m. dbh with fluted trunk and adventitious roots. Fruit dark orange with yellow-orange spots.

MO, , .

10187 Struthanthus

Tangled vine in canopy of # 10186. Whole plant yellow green.

17PPV 596/907

MO, .

10188 Mangifera indica L.

Cultivated tree near Gorgas Hospital, Ancón, alt. 40m. Petals yellow or pink.

MO, 9.

10189 Struthanthus

Vine enveloping part of canopy of # 10188. Flowers yellow green, fragrant.

17PPV 539-540/965-7

10190-10198

Vicinity of pistol range, 1½ km. SE of Pedro Miguel. alt. 15 m.

MO, .

10190 ~~Bumelia~~ Spondias

Tree 12 m. tall, 75 cm. dbh.

MO, , , .

10191 Struthanthus

Tangled viny mass hanging down 6 m. out of # 10190. Flowers yellow green, lightly fragrant.

MO, 5.

10192 Phoradendron quadrangulare (HBK) Krug & Urb. det. T. Croat, 1974

Common bushy parasitic shrub to ca. 1 m diam. in # 10190. Whole plant green.

Feb. 28, 1974

Canal Zone, Panamá

17PPV 539-40/965-7

10193-10196 In zone about 10 m. wide at edge of ~~the~~
Caimitillo Arm, a bay of Miraflores lake.

- MO, 9. 10193 Najas arguta HBK. det. R. L. 1977
- MO, 10. 10194 Ceratophyllum demersum L. det. R. L. 1977
- MO, 8. 10195 Hydrilla verticillata (L.f.) Royle det. R. L. 1977
- MO, . 10196 (Lemna) Spirodela punctata (Meyer) Thompson &
det. Davenport, 1981
- MO, . 10197 Tectona grandis L.
Cult. tree 12 m. tall. Large numbers planted here.
- MO, , , . 10198 Struthanthus phthirusa stelis (L.) Kuijt ¹⁹⁹³ det. J. Kuijt,
Bushy parasitic vine with hanging branches to
4 m. long in # 10197. Flower buds green and white.

Prov. Veraguas, Panamá [Feb. 25, 1974] 17PMV 480-2/079-081

10199-10203 On trunk and upper branches of # 10146. g.v. p. 185

- F. 10199 hepat.
- F. 10200 " "
- US. 10201 Graphid
- US. 10202 " "
- US, , . 10203 " "

~~Feb~~ March 1, 1974

193

Canal Zone, Panamá

17PPA 488/027-8

MD, , , .

10204 • ~~Legum~~ ^{see 11324} Meliac?

Grove of many stemmed shrubs to 6 m. tall at edge of secondary tropical moist forest and Summit Gardens. alt. 100 m.

Stems to 15 cm. diam., the larger ones fluted.

10205-10208 On stems of 10204

Same grove + prob. same shrub coll. in flower Apr. 15, 1974

Sub. # 11324

US, 10.

10205 Thelotrema.

Patches to 20 cm. diam.

US.

10206 Graphid.

US.

10207 " "

US, .

10208 " " Sarcographa

MO, 9.

10209 Piper

Shrub 1½ m. tall. Spikes hanging. Tropical moist forest at edge of Summit Gardens. alt. 100 m.

17PPA 471/035

10210-10227 Brushy roadside (± secondary tropical moist forest) along Gaillard Hwy, 2 km. NW of Summit Gardens. alt. 90 m.

MO, 29.

10210 Inga sapindoides Willd. det. R. L. 1975

Tree 8 m. tall, 15 cm. diam. Fruit green. Same tree coll. in flower Dec. 3, 1973 sub # 8611

10211-10217 On trunk and branches of # 10210.

US, .

10211 lichen
at 2 m.

US.

10212 Graphid
at 1½ m.

March 1, 1974

Canal Zone, Panamá

17PPA 471/035

- | | | |
|--|-------|----------------------------------|
| US. | 10213 | Graphid.
at $1\frac{1}{2}$ m. |
| US. | 10214 | Graphid |
| US. | 10215 | " " |
| US, | 10216 | " " <u>Sarcographa</u> |
| US. | 10217 | <u>lichen.</u> |
| 10218-10221 at 1-2 m. on 25 cm. dbh. <u>Cecropia</u> . | | |
| US. | 10218 | Graphid. |
| US. | 10219 | " " |
| US. | 10220 | " " |
| US, , , . | 10221 | " " |
| 10222-10225 on trunk and branches of 3 m. tall
<u>Genipa americana</u> shrub. | | |
| US. | 10222 | Graphid. |
| US. | 10223 | " " |
| US. | 10224 | " " |
| US, . | 10225 | " " |
| 10226-10227 on soil of steep roadside bank. | | |
| US, , , . | 10226 | <u>Cladonia</u> |
| MO, | 10227 | moss. |

March 2, 1974

95

Prov. Panamá, Panamá
17PPV 581-3/714-5

10228-10252 Rocky open grassland on summit of Taboga Island.
alt. 250 m.

10228-10236 On boulders.

US, . 10228 Parmelia

US, , . 10229 lichen

US, . 10230 " "

US. 10231 " "

US. 10232 " "

US, . 10233 " "

US. 10234 " "

US, . 10235 " "

~~US~~ MO, 10236 moss.

On boulder shaded by shrub.

US. 10237 Cladonia

steep roadside rock and clay bank.

US, . 10238 lichen

on boulder.

US. 10239 Ramalina

10240-10248 On Byrsonima crassifolia shrubs.

US. 10240 lichen

US. 10241

US. 10242

US, . 10243 Parmelia

US. 10244 Graphid.

US. 10245 " "

US. 10246 " "

US. 10247 " "

US, . 10248 " "

March 2, 1974

Prov. Panamá, Panamá

17PPV 581-3/714-5

alt. 250 m.

10249-10252 on dead shrubs. Summit of Taboga Island

- US, . 10249 ?Usnea
 US, . 10250 Lichen
 US. 10251 Parmelia
 US. 10252 Parmelia

17PPV 579-582/715-8

10253-10288 Dry tropical forest near summit of Taboga Island,
 + 10289 along road to radar station. alt. 200-250 m.

10253 - 10254. On trunk of 20 cm. dbh. cf. Cordia
alliodora

- US, . 10253 Lichen
 US. 10254 Lichen

10255-10257 On trunk of 20 cm. dbh. Cochlospermum
vitifolium

- US, . 10255 Graphid
 US, . 10256 " "
 US. 10257 " "

- US, . 10258 Lichen

On cult. Citrus shrubs.

10259-10262. On trunk and branches of 4 m. tall
Anacardium occidentale

- US. 10259 Lichen
 US. 10260 Graphid
 US, . 10261 " " Sarcographa
 US, . 10262 " "

March 2, 1974

Prov. Panamá, Panamá

17 PPV 579-582 / 715-8

- 10263-10265 ^{trunk of} on 20 cm. dbh. Ochroma pyramidale.
- US. 10263 lichen
- US. 10264 Graphid
- US, . 10265 " "
- 10266-10270 on 10 cm. dbh. Apeiba
- US. 10266 lichen
- US. 10267 Graphid
- US, . 10268 " "
- US, . 10269 " "
- US, , . 10270 " " prob. badly mixed.
- 10271-10285 on trees, shrubs and vines.
- US, . 10271 Graphid.
- US, . 10272 lichen.
- US. 10273 Graphid.
- US. 10274 " "
- MO. 10275 moss Leucobryac.
- US. 10276 lichen
- US. ¹⁰²⁷⁷~~10277~~ Thelotome?
- US. 10278 Thelotome?
- US. 10279 Thelotome?
- US, . 10280 lichen
- US, . 10281 " "
- US, . 10282 Graphid.
- US. 10283 " "
- US, . 10284 " "
- F. 10285 hepat.

March 2, 1974

Prov. Panamá, Panamá

17PPV 579-582/715-8

F. 10286 hepat

MO. 10287 moss

US, . 10288 Graphid.

at 1-2 m. on 20 cm dbh. Ficus cf. citrifolia.MO, . 10289 Bignon. Cydista aequinoctialis (L.) Miers
Woody vine. det. A. Gentry, 1974

March 3, 1974

199

Prov. Panamá, Panamá

ca. 17PPV 592-4/715-20 ~~00~~

Isla de Taboga.

10290-10292 Shady roadside, SE edge of Taboga village.
alt. 10 m.

MO.	10290	moss.
MO,	10291	moss
		Rocky bank.
MO,	10292	moss.
		On boulder.

17PPV 591/729-31

10293-10299 On the little island "Morro de Taboga", Taboga
Island. alt 0-20 m.

MO.	10293	<i>Bombacopsis quinata</i> (Jacq) Dugand
		Broken over tree along shore. Flowers fallen. Fruit brown. Trunk very spiny.

~~10293~~ 10294-10296 on trunk of #10293.

US.	10294	Graphid
US.	10295	lichen
US.	10296	lichen

US,	10297	lichen
		at 1½-2 m. on 20 cm. dbh. tree.

US,	10298	lichen
		on rock outcrop.

US, 5.	10299	lichen
		on mimosoid legume shrub along shore.

March 3, 1974

Prov. Panamá, Panamá

17 PPV 594-6/708-713

10300-10328 Along roads, 1 Km. SE of Taboga (village), Isla de Taboga. alt. 25-50 m. Brushy roadsides.

~~10329-10330~~

US, .

10300

lichen.

On buttresses of large Ficus.

MO,

10301

moss.

On shaded boulder.

10302-10303 at 1-2 m. on 10 cm. dbh. Cecropia.

US.

10302

Graphid.

US.

10303

lichen

10304-10305 On trunk of 20 cm. dbh. Luehea.

US, , .

10304

Graphid.

US.

10305

lichen.

US, .

10306

Graphid.

On trunk of 10 cm. dbh. Cochlospermum vitifolium.

US, , .

10307

lichen.

at 1-2 m. on 45 cm. dbh. tree.

MO.

10308

Ficus insipida Willd. det. J. ConradTree 10 m. tall with spreading crown and
copious milky sap. Figs green with lighter spots.

10309-10311 On trunk and larger branches of 10308

US.

10309

Graphid.

US.

10310

" "

US, , .

10311

lichen

March 3, 1974

Prov. Panamá, Panamá.

17 PPV 594-6/708-713

10312-10313 on shrubs.

US. 10312 lichen
 US, , . 10313 lichen.

10314-10319 on Byrsonima crassifolia shrubs.

US. 10314 Graphid.
 US, . 10315 " "
 US. 10316 " " Sarcographa
 US. 10317 lichen
 US, , . 10318 lichen
 US, . 10319 lichen.

10320-10322 at $1\frac{1}{2}$ -2 m. on trunk of 40 cm.
 dbh. Mangifera indica.

US, . 10320 lichen
 US. 10321 Graphid
 US. 10322 lichen.

10323-10324 at $1\frac{1}{2}$ m. on trunk of large
Mangifera indica

US. 10323 lichen
 US, , , . 10324 Graphid.

F, , . 10325 hepat.

At $1\frac{1}{2}$ m. on large Mangifera indica

10326-10328 on rocks.

US, . 10326 lichen
 US, . 10327 lichen
 US, , . 10328 lichen

March 5, 1974

Prov. Panamá, Panamá

10329-10401 Premontane wet forest along El Llano-Carti road,
 10405-10410 8 km. N of Pan. Am. Hwy. at El Llano. alt. ca. 450 m

- MO, 6. 10329 Sapind. Paullinia costata Schltdl. & Cham. det. T. Crooks 1974
 Vine. Fruit red outside, splitting to reveal the black seed, white aril and pink inside of fruit.
- MO, , . 10330 Davilla
 Vine. Accrescent sepals green with purple tinge.
- MO, . 10331 Dillen. Davilla kunthii St. Hil. det. K. Kubitzki, 1983
 Woody vine. Accrescent sepals green.
- MO, U, , , 10332 Comp. Piptocarpha chontalensis Baker det. R. L. 1976
~~P. poeppigiana (DC.) Baker det. Smith, 1987~~
 High climbing, blue to 7 m. Flowers white, odorless.
- , , . [10333 Guatteria amplifolia] specimen lost!
 Shrub 5 m. tall. Flowers green, turning yellow.
- MO, 5. 10334 Melastom. Miconia centrosperma Almeda
 Slender shrub 4 m. tall. Petals pink, then turning white, anthers yellow. det. F. Almeda, 1982
- MO, 8. 10335 ? Myrsin. Ardisia neei Lundell, new sp. det. Lundell, 1979
 Tree 10 m. tall, 10 cm. dbh. Inflorescence yellow green.
- MO. 10336 Swartzia simplex
 Slender tree 10 m. tall. Fruit orange, seed black, aril white.
- MO, 6. 10337 Melastom. Henriettella tuberculosa D. Sm. det. R. L. 1974
 Tree 7 cm dbh., 8 m. tall.
- MO, , , . 10338 Prestonia
 Vine with white latex. Corolla tube pink, lobes yellow, callous orifice white. Flowers lightly fragrant.

March 5, 1974

203

Prov. Panamá, Panamá

- MO, 4. 10339 ~~10339~~ *Piper*
Slender shrub 4 m. tall. Spikes hanging,
first cream, then green.
- MO, . 10340 Aroid. *Philodendron guttiferum* Kunth
Loosely appressed vine to 2 m. on 1975
slender tree trunk. Spathes closed, light
green, yellowish green toward tip.
- MO. 10341 *Polypodium fraxinifolium* Jacq. det. D.B. Keatinger
Vine on slender tree trunk. 1977
- MO, , . 10342 *Piper pubistipulum* C. DC.
Shrublet. det. J. Conrad, 1975
- MO, , , . 10343 Rub. *Dressleriopsis panamensis* Dwyer, 1975
Shrublet 40 cm. tall. det. J. Dwyer, 1975
- MO, , . 10344 fern.
Appressed to trunk of slender palm.
- MO, 10. 10345 *Siparuna* aff. *guianensis* Aubl. det. D. Lorence, 198-
Tree 7 m. tall, 7 cm. dbh. Foliage faintly
fragrant. Inflorescence yellow green.
- MO, 6. 10346 Gesner. *Besleria nervipraebens* Wiedl., ined.
1 m. tall. Corolla orange, fruit turning 1978
white. Leaf veins purple beneath. B. stricta L. Skog,
det. L. Skog, 1978.
- MO, , , . 10347 Rub. *Genipa curviflora* Dwyer sp. nov. type.
Shrub 2 1/2 m. tall. Buds green.
- MO. 10348 Hymenophyll. *Trichomanes elegans* L.C. Rich.
- MO, 10349 Moss. det. D.B. Keatinger 1977
On shrub.
- MO, 4. 10350 Laurac. *Ocotea dendrodaphne* Mez det. L.R. Holdridge 1977
Slender tree 5 m. tall, with pleasantly and

March 5, 1974

Prov. Panamá, Panamá

strongly aromatic. Immature fruits and cupule green, mature cupule red.

MO, , , .

10351

Anguria *Psiguria bignoniacea* (P. + E.) Wunderlin ^{det. W. Wunderlin 1975}

Vine. Petals orange red with lighter throat.

MO, , , .

10352

Cyclanth. *Evodianthus funifer* (Poir.) Lindm.

Vine to 5 m. in small tree. Spathe white. Infl-
orescence turning orange. det. B. Hammel, 1985

MO, , , , .

10353

Scroph. *Schlegelia nicaraguensis* Standl.

Appears to be a woody vine on a tree. Fruit
and calyx green with purple tinged area.
Fruit to 4.5 cm. diam.

MO.

10354

Commel. *Dichorisandra hexandra* (Aubl.) Standl.

Herb.

det. R. L. 1976

MO, 4.

10355

Annon. *Xylopia bocatorena* Schery

Small tree 8 m. tall, pleasantly aromatic. Flower
buds green, fruit red. det. J. Schatz, 1982

MO.

10356

Adiantum obliquum Willd.

terrestrial.

det. D. B. Kellinger 1977

MO, , .

10357

fer. *Dicranoglossum panamense* (C. Chr.) Gómez

Epiphytic on branches. det. D. B. Kellinger 1977

MO, 5.

10358

Guttif. *Tovomitopsis nicaraguensis* Pl. + Tr. det. D'Arcy, 1980

Tree 10 m. tall, 15 cm. dbh. Fruit dark purple,
to 2.1 cm. diam. by 2.3 cm. long. Fruit and
especially seeds with sticky white latex.

MO.

10359

Legum.-Mimo. *Inga filiformis* W. Zamora

Slender shrub 4 m. tall. Only one dead pod seen.

US, .

10360

lichen

On upper stem of # 10336.

March 5, 1974

205

Prov. Panamá, Panamá

- MO, 10361 moss.
On rotter log on ground.
- MO, 10362 moss.
On rotter log.
- MO, 10363 Peperomia macrostachya (Vahl) A. Dietr. det. R. L. 1976
Small epiphytic vine on log, probably originally
a canopy epiphyte.
- MO, 6. 10364 Spierana crassiflora Perk. det. J. H., 1975
Slender shrub 4 m. tall. Flowers yellow green.
- US, 10365 Thelotrema.
At. 1.5 m. on # 10364.
- MO, 7. 10366 Brosimum Perebea angustifolia (P. & E.) C. C. Berg
Slender tree 8 m. tall. det. C. C. Berg 1976
- MO, , 10367 Peperomia macrostachya (Vahl) A. Dietr.
Epiphyte. det. R. L. 1976
- MO, . 10368 Bromel. Ronnbergia petersii L. B. Smith det. J. Utter 1977
Epiphyte attached to tree trunk at 6 m.
Leaf sheaths dark purple within.
Inflorescence green.
- MO. 10369 Aroid. Stenospermation steyermarkii Bunt.
Clump of several stems attached to tree trunk
by root mass. Spadix light yellow. det. A. Gomez,
1981
- MO, 4. 10370 Piper ottoniaefolium C. DC.
Vine. Spikes erect. det. J. Conrad, 1975
- MO, 6. 10371 Uclastom. miconia smaragdina Naud. det. R. Liesner, 1975
Shrub 4 m. tall. Leaf veins (especially the
midrib) purple beneath. Calyx yellow green,
corolla white, filaments light purple.

March 5, 1974

Prov. Panamá, Panamá

- MO, , , . 10372 *Cephaelis glomerulata* D.Sm.
Old inflorescences blue. det. J. Dwyer 1976
- MO, . 10373 *Piper*
- us, . 10374 *Lichen*
at base of tree.
- ? 10375 ?
Slender tree 7 m. tall. Flowers white, mostly yellow green buds.
- MO, 4. 10376 *Ouratea*
Shrub 4 m. tall. ^{Fruit} ~~seeds~~ turning blue black, inflorescence becoming bright red.
- MO, . 10377 Apoc. Paratype *Boungafousia panamensis* Markgraf et al. 1982.
Shrub 4 m. tall with milky latex. Fruit green.
- MO, 5. 10378 *Myrsin*.
Small tree 7 m. tall.
- ↓ Holotype
MO, 12. 10379 Convolv. Type *Maripa lewisii* D. Austin 1978 or 79
Vine to 5 m. Flowers odorless, calyx and corolla light purple.
- MO, , , , . 10380 *Lecythid*. *Eschweilera hondurensis* Standl.
Huge tree. Petals and stamens fallen. det. S. Mori, 1983
- MO. 10381 Piperac. *Peperomia obtusifolia* (L.) A. Dietr.
Epiphyte. det. R. L. 1976
- MO, . 10382 *Orchid*. *Elleanthus graminifolius* (Bark. Rodr.) Løjt.
No flowers. Epiphyte. det. K. Barringer, 1984
- MO. 10383 *Orchid*.
Epiphyte. Petals greenish white, column purple.
- MO. 10384 *Orchid*. *Maxillaria confusa* Ames & C. Schweinf.
det. J. Atwood, 1999
- MO. 10385 *Orchid*.
Epiphyte. Fruit green. ~~det.~~

March 5, 1974

207

Prov. Panama, Panama

- MO, 10386 moss.
On branch of large tree.
- F, 10387 hepat.
On branch of large tree.
- MO, 10. 10388 Heisteria acuminata (Humb. & Bonpl.) Engl.
Shrub 4 m. tall. Flowers white. det. H. Steumer, 198-
- MO, 10389 Smilax mollis {Humb. & Bonpl.} det. R. Liesner, 1975
High climbing vine. Fruit orange green.
- MO, 8. 10390 Swartzia perplexa
Shrub 6 m. tall. Fruit green when young,
orange when mature.
- MO, 12. 10391 Euphorb. Tetrorchidium gorgonae Croiz. sp. ^{robleoanum}
Tree 8 m. tall, 15 cm. dbh. Fruit green,
the valves splitting away to reveal the three
black seeds completely surrounded by ~~pink~~ bright
juicy red arils det. Webster & Huff
- MO, 15. 10392 Capparis pittieri Brig. det. H. H. Iltis, Oct., 1974
Tree 7 m. tall, 15 cm. dbh. Flowers yellow
green, odorless. Fruit green.
- MO, 8. 10393 Piper
Vine. Spikes erect.
- MO, 10394 Guarea tonduzii C. DC. ? G. macropetala Pennington
det. T. D. Pennington
Tree 8 m. tall, 10 cm. dbh. Cauliflorous, the
inflorescences from the trunk and larger branches,
not from the leafy twigs. Leaves (lost!) large,
pinnately compound. Buds readily falling from
inflorescence.
See # 10989 for same species coll. with leaves, from same area.

March 5, 1974

Prov. Panamá, Panamá

- MO. 10395 *Gesner. Columnea arguta* Morton ^{small} det. L.E. Skog 1977
Epiphyte hanging off twig of tree. Leaves fleshy, to 3.5 mm. thick. Calyx green on outside, margins and inside purple.
- MO, 15. 10396 *Markea uli* (Dammer) Cuatrec. det. W.G. D'Arcy 1974
Epiphyte at 7 m. on tree trunk with several arching stems to 2 m. long and a "root" 1 cm. diam. loosely appressed to the tree and leading down to the ground. Infested by a large and a small species of ant. Corolla yellow green, tinged with purple. Fruit yellow orange, turning white.
- MO, . 10397 *Apoc. Tabernaemontana undulata* Vahl
Shrub 4 m. tall. Corolla (in bud) marked with red. Milky latex. det. A. Leeuwenberg
- MO, , . 10398 *Inga umbellifera* (Vahl) Steud. det. L.L. 1975
Shrub 3 m. tall. Calyx and corolla green, filaments white.
- MO, . 10399 *Apoc. ? Odontadenia punctulosa* (Rich.) Pulle
Woody vine with milky latex. Buds green and reddish. det. A. Gentry, 1974
- MO. 10400? *Bactris maraja* det. A. Henderson
Slender palm 3 m. tall. Fruit green.
- MO. 10401 *Archid.*
Epiphyte. Petals yellow with purple markings on lip.

March 5, 1974

209

Prov. Panamá, Panamá

- MO, 5. 10402 Cordia dwyeri Nowicke.
Shrub 5 m. tall along El Llano-Carti road,
7 km. N of Pan Am Hwy at El Llano. Premontane
wet forest. ~~Appears to be a second growth~~
~~shrub like Solanum hayesii(?)~~. Corolla
white, beautifully fragrant. alt. ca. 450 m.
- MO, , , . 10403 Persea americana Mill. det. H.v.d. Werff., 1984.
Tree 45 cm. dbh., 12 m. tall. Fruit green
with yellow green spots, immature, the
flesh bitter. Probably same tree coll. in flower on Jan 8,
1974 pub # 9253. Bushy second growth tropical moist
forest along El Llano-Carti road, 2 km. N of Pan Am
Hwy. at El Llano. alt. ca. 200 m.
- MO. 10404 Enterolobium cyclocarpum (Jacq.) Griseb.
Large tree with spreading crown ^{in pasture} at entrance
to El Llano-Carti road and Pan Am. Hwy, 1 km.
N of El Llano. alt. ca. . Fruit green, others
on tree ripe and brown. det. R.L. 1975
- 10405-10410 At 0-2 m. on shrubs and trees in forest with # 10329-10401
- US, . 10405 lichen
- US. 10406 lichen
- US, . 10407 lichen
- US. 10408 Thelotrema
- US, , . 10409 lichen
- US, , . 10410 lichen

March 9, 1974

Prov. Panama, Panamá

Vic. ITPPV 505/835

10411-10422 Brushy grassy slope of Cerro Cabra above Vera Cruz. alt. 125 m.

MO, , , . 10411 *Guazuma ulmifolia* Lam.

Tree 6 m. tall. Flowers yellow-green and red. Fruit green. det. R. Liesner, 1975

MO, 7.

10412 *Phoradendron quadrangulare* (HBK.) R. & H. ^{det. Kuijt 1976}

Parasitic shrub in # 10411. Whole plant green. Ripe fruits yellowgreen, seed surrounded by very sticky substance.

MO, 5.

10413 *Oryclanthus spicatus*

Small parasitic shrub in # 10411. Sepals dark red. Fruit green with purple ring at tip.

MO.

10414 *Lygodium venustum* Sw.

Vine in grass. det. G.D.B. Kellinger 1977

MO, , .

10415 Rub. *Contarea hexandra* (Jacq.) Schum.

Shrub 4 m. tall. Recently badly burned by grass fire. det. J. Dwyer

MO, 8.

10416 *Jypha domingensis* Pers. det. Galen Smith 1980

Patch To 2 m. tall. O part of spike visited by pollen gathering bees when in flower.

MO, , , .

10417 *Cyperus odoratus* L.In *Jypha* patch. det. R. Liesner, 197-

MO, 5.

10418 Scroph. *Semodia durantifolia* (L.) Sw.

Corolla lobes blue. det. M. Christenhusz 2010

10419-10422 On boulders.

US, .

10419 lichen

US, .

10420 lichen

March 9, 1974

211

Prov. Panamá, Panamá

vic. 17PPV 505/835

US, . 10421 *lichen*

US, , . 10422 *lichen*

Canal Zone, Panamá

17PPV 537/839

MO, 12.

10423 fern. Acrostichum aureum L.

Patch at edge of mangrove swamp along
road K-2B. Río Venado, 2 Km. SW of Fort Kobbe.
to 3 m. tall. det. D.B. Lellinger 1977

MO, 5.

10424 Basella alba L. det. W.G. D'Arcy 1978

"spinach" or "espinacas". For sale at Chinese
garden along Thatcher Highway, 1 Km. W of
Rodman Naval Station. ~~Herb~~ Succulent.
Sepals of oldest flower buds light pink at tips.

March 10, 1974

Canal Zone, Panama

17 PPA 372/139

alt. 100 m.

- 10425-10442 Vicinity of first gorge and "waterfall" ~~to~~ Río
Mendoza, 1/2 km. upstream from Pipeline Road bridge.
8 km. NW of Gamboa. alt. 100 m. Premontane wet forest.
- MD, 8. 10425 fern. Asplenium falcinella Maxon det. D.B. Gellinger 1977
Epiphyte on tree branch 7 m. above stream.
Wilted.
- MD, 10426 moss
On large boulder.
- MD, 10427 Podostem.
On rocks where kept damp. At or just above
present water level.
- US, 10428 lichen
On 7 cm. diam. vine, 1 m. from ground.
- US, 10429 lichen
On woody vine near ground.
- US, 10430 lichen.
At 0.75 m. on 10 cm. diam. trunk of shrub.
- US, 10431 lichen
at 1.25 m. on 10 cm. diam. trunk of shrub.
- US, 10432 lichen
at 1 m. on spiny stiff roots of Socratea durissima.
- MD, 10433 Anthurium friedrichstahlis Schott det. T. Croat.
Epiphyte on tree branch. Spadix dull red. 1975
- F. 10434 hepat.
rock wall of gorge.
- F. 10435 hepat.
rock wall of gorge.
- F. 10436 hepat.
rock wall of gorge.

March 10, 1974

213

Canal Zone, Panamá

17PPA 372/139

F. 10437 hepat.

On log.

F. 10438 hepat.

On rock wall of gorge.

MO, 6. 10439 Comp. Koanophyllon wetmorei (B.L. Robins.) King & B.L. Robins.

Shrub 4m. tall arching over gorge from rocky Aechmea magdalenae patch. det. B.L. 1976

MO, , , 10440 Gesner. Columnea purpurata Hanst. det. L.E. Skog, 1977

Epiphyte at 2 m. on small tree. Calyx bright red orange.

US, , , 10441 lichen.

On bedrock, much of it below water level most of the rainy season.

MO, , . 10442 Orthoclada

Gravelly bank.

17PPA 370/136

10443-10444 Premontane wet forest along Río Mendoza near Pipeline Road bridge. 8 Km. NW of Gamboa. alt 100m.

MO, . 10443 orchid.

Epiphyte with stems to 1.2 m. long. Flowers badly withered, originally purple.

MO, , , 10444 Theophrast. Claviija costaricana Pitt.

Shrub 1½ m. tall, unbranched. Inflorescences hanging, flowers orange, with a light sweet odor like ripe pumpkins. det. B. Stahl, 1988

17PPA 369/131

MO, 4. 10445 Virola

Tree 10 m. tall. Premontane Wet Forest along

March 10, 1974

Canal Zone, Panama

17PPA 369/131

Pipeline Road, 8 Km. NW of Gamboa. alt. 125 m.
Inflorescence rusty.

17PPA 401/~~101~~105

MO, 15.

10446 *Tricanthera gigantea* (HBK) H+B.

Many stemmed shrub 6 m. tall along Pipeline Road, 3½ Km. NW of Gamboa. alt. 50 m. Along small stream, secondary tropical moist forest. Corolla red, shining, visited by hummingbirds.

17PPA 408/083

MO, 26.

10447 *Tabea guayacan* (Seem.) Hemsl.

Tree ~~15~~ m. tall, a complete mass of yellow flowers, leafless. Tropical moist forest along road to airport, 1½ Km. W of Gamboa. alt. 40 m. Calyx yellow green, corolla yellow with red markings in floor of throat. Flowers with faint fragrance, visited by hummingbirds.

Same tree coll. in fruit Apr. 11, 1974 sub # 11152

March 11, 1974

215

Prov. Panamá, Panamá

¹⁰⁵⁰⁴
~~10448~~ Premontane wet forest along El Llano - Carti road,
12 Km. N of Pan Am Hwy. at El Llano. Alt. ca. 400m.
~~Along~~ Vic. stream

MO. 10448 Markea neurantha Hemsl. det. M. G. D'Ary, 1975
Probably an epiphytic shrub. Stem 2 m. long.
Flowers hanging, calyx green. An unopened corolla
green on outside, purple within with green spots.

MO, . 10449 fern. Cyclodium guianense (Klotsch)
Terrestrial. det. D. B. Lellinger 1977

MO, , . 10450 Monstera obliqua Mig. det. T. Croat, 1988
Vine appressed to trunk of slender shrub, to
2 m. Spikes erect, orange.

MO. 10451 Hymenophyll. Trichomanes polypodioides L.
Vine on trunk of shrub. det. D. B. Lellinger 1977

MO, 4. 10452 Pilea
On rocks along stream

MO, . 10453 Rinorea squamata Blako. det. Hekking, 1982
Shrub 5 m. tall. Fruit green.

MO, , , . 10454 Melastom. Miconia smaragdina Naud. det. R. Liesner,
1975
Shrub 4 m. tall on rocky stream bank. Fruit green.

MO, , , . 10455 Piper pseudogargaranum C. DC. / P. polytrichum C. DC.
Shrub 1½ m. tall on rocky stream bank. Spikes
erect.

MO. 10456 Peperomia obtusifolia (L.) A. Dietr.
Epiphyte. det. R. L. 1976

?
MO, 4. 10457 Selaginella arthritica Alston. det. D. B. Lellinger
1977
Rocky stream bank.

split later

? 10457-a Selaginella anceps Presl det. D. B. Lellinger 1977

March 11, 1974

Prov. Panamá, Panamá

- MO, . 10458 Piperac. Peperomia pernambucensis Mig. det. R. L. 1976
At 1 m. on trunk of small tree.
- MO, . 10459 fern. Asplenium pteropus Kaulf. det. D. B. Lellinger 1977
At 2 m. on trunk of small tree.
- MO, , , . 10460 Hymenophyll. Trichomanes collarium V.D. Bosch
Vine at 2 m. on trunk of small tree. det. D. B. Lellinger 1977
- MO. 10461 Hymenophyll. Trichomanes membranaceum L. det.
At 1 1/2 m. on trunk of tree. D. B. Lellinger 1977
- MO, , . 10462 fern. Tectaria plantaginea (Jacq.) Maxon
Terrestrial, on rocky creek bank. det. D. B. Lellinger 1977
- MO. 10463 Peperomia blephariphylla Trel. & Yuncker
Epiphyte. det. R. L. 1976 P. ciliaris C. DC.
det. R. Callejas
- MO, , , . 10464 Guttif. Toumouita stylosa Hemsl. det. D'Arcy, 1980
Shrub 5 m. tall. Filaments white.
- MO, 10465 moss.
On branch on ground.
- MO. 10466 fern. Dicranoglossum panamense (C. Chr.) Gómez
At 3 m. on branch of shrub. det. D. B. Lellinger 1977
- MO, . 10467 Commel. Cochlostema odoratissima Lam. det. R. L. 1976
Tank epiphyte on branch of tree. Calyx light purple, petals dark blue, clump of yellow fuzz in center. Flowers lightly fragrant.
- MO. 10468 fern Peltapteris peltata (Sw.) Morton f. peltata
Epiphyte on woody vine. det. D. B. Lellinger 1977
- MO, , , . 10469 Hymenophyll. Trichomanes elegans L.C. Rich. det. D. B. Lellinger 1977
On rocky creek bank. Iridescent blue green.
- MO, 4. 10470 Piper. schiedeana Steud. det. M. Tebbes, 1988
Shrub 3 m. tall. Spikes erect.

March 11, 1974

Prov. Panamá, Panamá

- MO. 10490 ~~10471~~ *Tectaria heracleifolia* (Willd.) Underw. var. *heracleifolia*
on ~~fallen~~ log. D.G. 1977.
- MO, , . 10471 ~~10471~~ (*Carludovica*) *Dicranopygium harlingii*
det. B. Hammel, 1985 on rocks in streambed Fruit green.
- MO, 10472 ~~10472~~ moss.
on rotten log.
- MO, , . 10473 *Piper*
Shrub 3m. tall. Spikes green, hanging.
- MO, , . 10474 *Meclastom* *Clidemia*, probably n.sp. (can be described if MO specimen has flowers at anthesis). det. J.J. Wurdack 1976
Shrub 1m. tall. Younger leaves purple beneath. Calyx red, petals very pale yellowish with tinge of purple at tips, filaments yellow.
- MO, , , . 10475 *Hymenophyll. Trichomanes diversifrons* (Bory) Matt.
Steep clay bank along creek. det. D.B. Gellinger 1977
- MO. 10476 *Pernier*.
Steep clay bank along stream.
- MO, . 10477 *Urtic*
On rotten log along stream. Light green strip on each side of midrib of leaf above. Inflorescence pink and white.
- MO, , . 10478 *Stercul. Theobroma chocoensis* Cuatrec. det. A. Gentry 1975
Large tree 75 cm. dbh, 25 m. tall with fluted trunk. Cauliflorous with flowers all the way from near the ground ⁱⁿ clusters on swollen areas to the ca 2cm. diam. branchlets in the canopy. Leaves rusty beneath on the tree. Fruits rotten, empty, picked up from the ground although a few dead ones seen on the tree, to ca. 18x12cm., brown. Flowers

March 11, 1974

Prov. Panamá, Panamá

with light odor, somewhat like that of flowers of *Sterculia apetala*. Petal appendages and staminodes red, rest of the flower dull yellowish. Leaves, fruit and most of flowers picked up from ground.

- MO, . 10479 Gram.
- MO. 10480 *Anthurium fragrantissimum* Croat det. Croat, 1961
Epiphyte at 2 m. on a still root. Peduncle purple, spathe green. Spadix yellow, erect, ~~spicy~~ spicy fragrant like root beer.
- MO, , . 10481 *Carpotroche platyptera* Pittier
Shrub 4 m. tall, 5 cm. diam. Petals white, anthers yellow. Cauliflorous. Fruit with narrow green stripe between the orange wings and their bases. det. R. Wiesner, 197-
- MO, , , . 10482 *Witheringia aff. asterotricha* (Standl.) Hunz. det. W. G. D'Arcy, 1975
Shrub 2 m. tall. Fruit orange.
- MO, . 10483 *Psychotria uliginosa* Sw. det. J. Dwyer, 1975
Shrub 1/2 m. tall. Fruit bright red.
- MO, , . 10484 Bromel. *Tillandsia spiculosa* Griseb. var. *spiculosa*
Canopy epiphyte. Fruit green. det. J. Utley
- MO. 10485 Gesner. *Codonanthe luteola* Wiehl det. D. T. Skog 1978
Canopy epiphyte. Leaves succulent, 2 mm. thick.
- MO. 10486 fern. *Cochlidium seminudum* (Desv.) Maxon ex C. Chr.
Canopy epiphyte. det. D. B. Kellinger 1977
- MO, . 10487 Piper
Decumbent shrublet. Spikes erect.

March 11, 1974

#10490 filled
see p. 217

219

Prov. Panamá, Panamá

- MO. 10488 Anthurium hacumense Engl. det. T. Croat, 1975
Attached by root mass to slender tree at 2 m.
from ground. Spadix light red, ~~2x16~~ 2x16 cm.
- MO. 10489 Apoc. Tabernaemontana undulata Vahl ^{det. A. Hoenen}
Shrub 5 m. tall. Fruit green with purple lines.
- MO, 5. 10491 Inga Pithecolobium rufescens (Benth.) Pittier
Shrubs 2-4 m. tall. Inflorescence white, ^{det. R. Liesner} $\pm$ odorless. 1975
- MO, . 10492 Aroid.
Terrestrial. Leaf dark plush green above, light
green below. Petiole and peduncles with several
wings. Inflorescences young, spathe green, spadix pink.
- MO, , , . 10493 Rub. Psychotria suerrensii Donn. Sm. det. J. Dwyer,
Slender shrub 2 1/2 m. tall. Corolla white. 1975
- MO, 6. 10494 Apoc. Tabernaemontana undulata Vahl ^{det. A. Hoenen}
Shrub 3 m. tall. Flowers fragrant, corolla
lobes yellow, tube red. Fruit green with purple marks.
- MO, , . 10495 Peperomia obtusifolia (L.) A. Dietr.
Epiphyte. Leaves green above. Leaves beneath,
stems and inflorescences reddish. R. L. ~~1976~~ 1976.
- MO, 5. 10496 Peperomia angularis C. DC. ? / P. obscurifolia C. DC.
Epiphyte. R. L. 1976. det. R. Callejas, 19--
- MO, , , . 10497 Polypodium Pleopeltis percussa (Cav.) Hook. & Grev.
Epiphyte. D. L. 1977.
- MO, , , . 10498 Gesner. Columnnea zebrina Raymond det. L. Skog, 1977.
Epiphyte. Leaves generally purple tinged below,
with a purple area at tip. Corolla yellow
with very dark purple stripes (appearing
black.)

March 11, 1974

Prov. Panamá, Panamá

- MO, , , , 10499 Markea ulai (Dammer) Cuatrec. det. W.G. D. Fry, 1982
 Epiphyte. Corolla pale green or pale greenish purple. Fruit with a purple spot around at tip around style scar, yellow orange when young, when mature white, pear shaped, 1.5 x 1 cm. Seeds light brown, 35 in one fruit.
- MO. 10500 fern. Pteris podophylla Sw.
 Epiphyte? D.L. 1977.
- MO. 10501 Commel. Cochliostema odoratissima Lem.
 Tank epiphyte. Buds blue purple. Same species as # 10467 despite being smaller and more compact? R.L. 1976.
- MO. 10502 fern. Asplenium falcinellum Maxon
 Epiphyte. P D.L. 1977
- MO, . 10503 Solanum § Torvum
 Shrub 1 m. tall. Open weedy area along creek in clearing. Corolla white.
- MO, 5. 10504 Peperomia macrostachya (Vahl) A. Diet.
 Crawling over clay of roadside, probably originally a canopy epiphyte in pile of tree tops. Stem marked with purple. R.L. 1976
-
- 10505-10527 Premontane wet forest along El Llano-Carti road, 10.5 km. N of Pan Am Hwy at El Llano. alt. ca. 450 m.
- MO, 5. 10505 Mandevilla
 Vine at edge of forest. Corolla lobes light yellow, throat red. white ~~tuber~~ latex.

March 11, 1974

Prov. Panamá, Panamá

- 10506-10512 Epiphytes. D.L. 1977.
- MO, . 10506 fern. *Peltapteris peltata* (Sw.) Morton f. *peltata*
- MO. 10507 fern. *Grammitis serrulata* (Sw.) Sw. D.L. 1977.
- MO, 10508 moss.
- MO, , , . 10509 Polypod. *Polypodium maritimum* Hieron. D.L. 1977.
Epiphytic vine.
- MO. 10510 orchid.
Flowers yellowish with purple.
- MO. 10511 orchid.
Fruit green.
- MO, . 10512 orchid.
Flowers dead and brown. Fruit dull
purplish green.
- MO, , , . 10513 Myrt. *Syzygium samarangense* (Bl.) Merril & Gentry?
det. R. Liesner, 1975
Shrub 5 m. tall. Fruit irregular, ca. 7 cm.
long by 6 cm. wide, warty, green and purple.
- MO. 10514 *Lomariopsis fendleri* D.C. Eaton
Epiphyte on shrub. D.L. 1977.
- MO. 10515 Palm. *Pholidostachys pulchrum* Wendl. ex Burret
4 m. tall, 4 cm. diam. Leaf blade 1 m. long.
Inflorescence from 10th node below lowest
living leaf. Fruit green, very obscurely
fluted or ribbed, this becoming pronounced
on drying. det. Al Gentry
- MO. 10516 orchid.
Epiphyte on tree trunk at 10 m. Lip dark
purple with frilly yellow lines, other
tepals lighter purple.

March 11, 1974

Prov. Panamá, Panamá

- MO, , , . 10517 Malpigh. Banisteriopsis martiniana (Juss.) Cuatr. ^{willburii B. Gates sp. nov. paratype.}
Vine trailing on ground of bulldozed roadside.
Flowers bright yellow, odorless. fide Fl. Neotr. 1982.
- MO, , . 10518? Sourubea
Woody vine. Fruit green.
- MO, , . 10519 Dendropanax punctatus M. J. Cannon det. M. Cannon, 1988.
Small tree 6 m. tall. Fruit dark purple.
- MO, , , , . 10520 Syngeonium macrophyllum ~~podophyllum~~ Schott det. Croat in litt. 1982.
Vine appressed to tree trunk, forming a dense mass at 2 m. from ground. Several successive leaves with up to 9 inflorescences in the axils. Stem ca. 3.5 cm. thick. Plant with abundant white sap. Spathe green, tightly rolled. Fruiting portion of spadix to 4 x 5 cm. det. T. Croat 1978.
- MO, , , . 10521 Peperomia macrostachya (Vahl) A. Dietr. R. L. 1976.
Epiphyte on trunk of slender tree around mass of other epiphytes. Stem with purple stripes.
- MO. 10522 Palm. Wettinia angusta P. & E. det. T. Croat. 1976.
MADW 32573. 10 m. tall, 9 cm. diam., cut stem exuding a pale brown sap from the center portion. Crown with 4 expanded leaves, crownshaft 65 cm. long, petiole 30 cm. long, leaf blade 1.45 m. long, all pinnae departing at about the same angle. Inflorescence with green fruit from the 2nd node below the crownshaft.
- 10523-10526 On stem of # 10522.
- MO. 10523 Piperac. Peperomia pernambucensis M. J. at 5 m. R. L. 1976.

March 11, 1974

Prov. Panamá, Panamá

- MO. 10524 *Lobel. & Burmeistera microphylla* Donn. Sm.
Epiphyte at 5 m. Stems horizontal,
fruit hanging. Leaves fleshy. Mature(?)
pedicel, calyx and fruit white with purple
markings. det. Wilbur, 1976.
- MO, . 10525 *Polypodium maritimum* Hieron. D.L. 1977.
At 5 m. and just below crownshaft.
- MO. 10526 *Gesner. Codonanthe luteola* (Wiehl)
Near top of stem. Leaves thick, fleshy. Corolla
light yellow with red inside tube. det. D.T. Skog
1978
- MO, , . 10527 *Passiflora tryphostematoidea* Harms
Herbaceous vine. Fruit bright orange,
3 x 3.5 cm. The whole mass of dark gray
seeds sticking together by the gooey
whitish pulp. det. A. Gentry, 1975
~~10528-10531~~
- 10528-10531 Premontane wet forest along El Llano-Carti
road, 10 Km. N of Pan Am Hwy at El Llano.
alt. ca. 450 m.
- MO. 10528 *Pentagonia gymnopoda* (St.) St. det. J. Dwyer, 1975
Slender unbranched shrub 3 m. tall. Fruit
dark purplish brown, clustered on stem.
- MO, 5. 10529 *Viola. Rinorea passoura* (DC.) Kuntze
Shrub. Flowers light yellow. det. Hekking, 1982
- MO, . 10530 *Anthurium littorale* Engl. det. T. Croat, 1975
Epiphyte from dense root mass. Spadix purple.
- MO, , , , . 10531 *Witheringia* aff. *asterotricha* Standl. & Hunz.

March 11, 1974

Prov. Panamá, Panamá

Shrub 2 m. tall. Corolla lobes recurved, greenish yellow, anthers white. Fruit bright orange.

10532-10535 Premontane wet forest along El Llano-Carti road,
7½ Km. N of Pan Am Hwy at El Llano. alt. ca. 450 m.

MO, 5.

10532 *Virola*

Tree 8 m. tall, 15 cm. dbh. with annomaceous branching. Inflorescence turning orange and pungent fragrant.

MO, WRS,

10533 *Capparis pittieri* Standl. det. H. H. Iltis, 1974

Tree 4 m. tall, 5 cm. dbh. Flowers light green.

MO.

10534 *Bromel. Guzmania lingulata* (L.) Mez det. J. Utley, 1978

Epiphyte on tree trunk. Leaves purple striped.

Inflorescence ~~bracts~~ bracts bright red.

MO,

10535 *Gent.?* *Apoc.?*

Tree 6 m. tall, 8 cm. dbh. Calyx green, corolla white, readily turning brownish-black. Flowers with powerful sweet penetrating musty odor, not entirely pleasant, to me anyway.

March 12, 1974

Canal Zone, Panamá

17PPA 488/020

MO, 5.

- 10536 Ficus lutea Vahl (int. from Africa)
Cult. small tree, spreading branches, 8 m.
tall with aerial roots twining around
trunk and lower branches. Summit
Gardens, alt. 80 m. Same tree collected
sterile Oct. 15, 1973 sub # 7421.
Figs orange with lighter spots, both in axils of
leaves and on leafless parts of the ca. 2 cm.
diam. twigs, somewhat flattened, to 1.7 cm.
in longest diameter, stigmas purple.
Sap milky. det. C. C. Berg, 1982

March 16, 1974

Prov. Chiriquí, Panamá

17PLV 445-7/706-708

10537-10582

10791-10811

Pastures and citrus groves with remnants of lower montane wet forest, 2 Km. E of Boquete, alt. 1450 m.

MO, , .

10537

Croton guatemalensis Lotzky

Shrubby tree 5 m. tall. det. G. Webster, 1998

MO, 6.

10538

Phoradendron tonduzii Treb. det. J. Kuijt, 1997

Parasitic shrub on #10537. Foliage orange green. Fruit turning orange. The green and yellow striped seed surrounded by clear sticky pulp.

MO.

10539

Orchid.

Epiphyte on wooden fence post. Flowers purple.

MO, , , .

10540

Saurauia

Tree 6 m. tall. Flowers sweet smelling, petals white, anthers yellow.

MO.

10541

Plantago australis Lam.

Roadside. det. Liesner, 1981

MO, .

10542

Croton panamensis (Klotzsch) Müll. Arg. det. R. Liesner

Small tree 5 m. tall used as a living fence post. Flowers yellow green, lightly fragrant.

MO, 5.

10543

Phoradendron

Parasitic shrub on 10542. Leaves often yellow green. Inflorescence yellow.

MO, 4.

10544

Croton guatemalensis Lotzky det. G. Webster, 1998

Tree 8 m. tall, 30 cm. dbh. Flowers yellow green, fruit green.

MO, , , .

10545

~~Planch?~~ Flacourt? Xylocarpus intermedia (Seem.) Triana & Planch.

Tree 10 m. tall, 40 cm. dbh. Leaves shiny above. Fruit green. det. G. Davidse, 1995

March 26, 1974

Prov. Chiriquí, Panama

17PLV 445-7/706-8

- MO, 4. 10546 Myrt. Myrcia splendens (Sw.) DC. ? det. R.L.
Tree 10 m. tall, 30 cm. dbh. Flowers greenish ^{white}.
- MO, 12. 10547 Loranth. Phoradendron undulatum Eichl.
Parasitic shrub 1½ m. tall in # 10546.
Sepals light green. det. Kuijt 1976
- MO, . 10548 Inga punctata Willd.
Sterile tree # 10 m. tall, 35 cm. dbh.
- MO, 4. 10549 Struthanthus quercicola (C. & S.) Blume.
Shrubby parasitic vine on # 10548.
Flowers yellow green. det. J. Kuijt 1977
- MO, 5. 10550 Comp. Critonia daleoides DC. R.L. 1976.
Shrub 4 m. tall, 8 cm. diam. Leaves
slightly fleshy.
- MO, 4. 10551 Loranth. Phoradendron tonduzii Trel.
Parasite on # 10550. Foliage yellowish.
Inflorescence yellow. det. J. Kuijt, 1977
- MO, 5. 10552 Melastom. Conostegia ^{Xalapensis} ~~panamensis~~ (Bonpl.) DC.
Tree 7 m. tall, 15 cm. dbh. Petals white, anthers
yellow. det. R. Liesner
- MO, 7. 10553 Phoradendron undulatum Eichl. det. J. Kuijt ¹⁹⁷⁶
Bushy parasitic shrub ^{to 1 m. diam.} in # 10552. Sepals
pale green.
- MO, . 10554 Struthanthus belizensis Lundell det. J. Kuijt.
Sterile parasitic vine in # 10552. 1989
- MO, 4. 10555 Croton guatemalensis Wotzy det. P. Berry.
Bushy tree 5 m. tall. Fruit green. Unf. 2006
- MO, . 10556 Struthanthus belizensis Lundell det. J. Kuijt, 1989
Parasitic vine enveloping crown of # 10555.

March 16, 1974

Prov. Chiriquí, Panama

17PLV 445-7/706-8

- MO, 5. 10557 Anthurium scandens (Aubl.) Engl.
Epiphyte on tree, forming clumps of many stems from dense root mass. Spathe and spadix light green. det. T. Croat, 1975
- MO, . 10558 Citrus sinensis (L.) Osbeck det. T. Elias
Bushy shrub 4 m. tall. Now an isolated tree in pasture, undoubtedly orig. planted. Flowers white, with beautiful sweet odor. Fruit yellow.
- MO, 6. 10559 Struthanthus belizensis Lundell det. J. Kuijt, 1989
Parasitic vine completely covering canopy of # 10558. Flowers yellowgreen. Fruit dull orange with creamy pap.
- MO, . 10560 Anacard.? Tapirira brenezii Standl. det. T. Croat, 1975.
Tree 15 m. tall. Flowers light green. With a parasitic loranth too high to reach.
- MO, , , . 10561 Melastomo.
Tree 7 m. tall, 20 cm. dbh. Flowers sweetly fragrant. Petals white, anthers yellow.
- MO, 5. 10562 Orchid.
Epiphyte. Sepals yellow, lip mostly glossy purple.
- MO, . 10563 fern. Neopeltis Elaphoglossum
On stump. Curled up. det. A. R. Smith, 1985
- F, , . 10564 ~~moss~~ hep.
On tree trunk.
- U.S. 10565 Lichen
On trunk of small Proton (same species as # 10537, 10544, 10555).

March 16, 1974

229

Prov. Chiriquí, Panama

17PLV 445-7/706-8

US, . 10566 lichen.

On trunk of small *Croton* tree (same species as # 10537, 10544, 10555).

~~10567~~

10567-10578 at 0-2.5 m. on trunk of 80 cm. dbh. *Quercus*.

US. 10567 lichen

US. 10568 *Thelotrema*?

US, . 10569 lichen

US. 10570 Graphid.

US, , . 10571 lichen

US. 10572 " "

US, . 10573 " "

US. 10574 " "

US. ~~SE~~ 10575 " "

US, , . 10576 " "

US, , , . 10577 *Thelotrema*.

US, b. 10578 *Stictac.*

MO. 10579 Polypod. *Pleopeltis macrocarpa* var. *complanata* det. D. G. 1977
Epiphyte on wooden fence post. (weath.) Zell.

MO. 10580 orchid.

Epiphyte on wooden fence post. Flowers yellowish and red.

MO. 10581 orchid.

Epiphyte on wooden fence post. Flowers purple and green.

MO, . 10582 *Polypodium polypodioides* var. *aviculare* Weath.

~~Common~~ Common epiphytic vine tightly appressed to tree trunks. D. G. 1977

March 16, 1974

Prov. Chiriquí, Panamá
17PLV 445-7/706-8

10791-10802 On fallen tree trunks.

MD, .	10791	<u>Peperomia tetraphylla</u> (G. Forst.) Hook. & Arn. R.G. 1976.
US.	10792	lichen <u>Pyrenopeziza</u>
US.	10793	" "
US, , .	10794	Graphid.
US, , , .	10795	lichen
US.	10796	" "
US, , , .	10797	" "
US, , , .	10798	" "
MD.	10799	moss.
MD,	10800	" "
MD,	10801	" "
F, , .	10802	hepat.

10803-10811 On old rotting logs.

F, .	10803	hepat.
MD,	10804	moss
MD,	10805	" "
US.	10806	lichen
US, b.	10807	lichen
US.	10808	" "
US.	10809	" "
US.	10810	" "
US, .	10811	<u>Cladonia</u>

March 17, 1974

98 seamiros

231

(ab incola "shamrock"
dicintur.)

Prov. Chiriquí, Panamá

17PLV 374/746-7

10583-10625 Lower montane rain forest along road at
Quebrada El Velo, near Finca Lérída, 6 km.
NW of Boquete. alt. 1700 m.

F, , .

10583 hepat.
On tree trunk.

F.

10584 hepat.
On tree trunk.

MO, , .

10585 Orchid.
Epiphytic mass at 4 m. on trunk of tree.
Fruit with soft green spines.

MO,

10586 moss.
On rotten log.

10587 -10594 Shady roadside bank.

MO.

10587 moss.

MO,

10588 moss. Polytrichaceae

F.

10589 Anthocerot.

F, , .

10590 hepat

MO,

10591 moss.

MO,

10592 moss

F, , , .

10593 hepat.

MO,

10594 moss.

F, .

10590.a hepat.

10595-10613 Along shady stream.

MO,

10595 moss. on bank.

F, 7.

10596 hepat.

Covering lower trunk of large tree.

F, 6.

10597 hepat.
On bank.

March 17, 1974

Prov. Chiriquí, Panamá

17PLV 374/746-7

- F. 10598 Marchantia
On rock in stream.
- MO, . 10599 Peperomia palmana C. DC. R.L. 1976.
On bank. Terrestrial.
- MO, 10600 moss.
On rotten log.
- MO, 10601 moss.
On rock.
- F. 10602 hepat.
On rock.
- F. 10603 hepat.
On rock.
- F, , . 10604 hepat.
- MO, 10605 moss.
On rotten log.
- F, , . 10606 Anthocerot.
On rocks at edge of stream.
- MO, 10607 moss.
On stones.
- MO, , , . 10608 fern. Diplazium grandifolium Sw. D.L. 1977.
Rocky bank.
- MO, , , . 10609 fern. Diplazium tablazianum Christ.
Rocky bank. D.L. 1977.
- F. 10610 hepat.
On rock in stream.
- F. 10611 hepat.
On rock in stream.
- MO, 10612 Moss
On rock.

March 17, 1974

283

Prov. Chiriquí, Panamá

17PLV 374 / 746-7

MO.

10613 Palm Chamaedorea pacaya Oerst.

det. A. Gentry.

Wiry, 2½ m. tall. Four expanded leaves.
Ripe inflorescence from 3rd node below
lowest living leaf. Inflorescence orange,
fruit turning black with orange pulp.

US, , .

10614 Cladonia

Soil of roadside bank.

MO, 4.

10615 Umbellifer Cyclospermum leptophyllum (Pers.)

Sprague & Wilson

Roadside. Petals white with purple tips.

MO, , .

10616 Piper

Spikes white, hanging.

MO, , .

10617 Rub. Hoffmannia pittieri Standl.

Flowers odorless, corolla yellow. Fruit
white, spongy, juicy, ± tasteless, to 1.2
cm. diam. Seeds black. det. J. Dwyer.

MO.

10618 Gesner. Gasteranthus wendlandianus (Hanst.) Wiehl

Terrestrial, 1 m. tall. Corolla yellow with
dark red spots. det. D.T. Skog 1978

MO, .

10619 Commel. Campelia zanonia (L.) HBK. R.L. 1976.

0.75 m. tall. Petals white.

MO, , , , .

10620 Gesner? Solenophora calycosa J.D. Sm.

Flowers odorless. Corolla bright orange
on outside, yellow within with dark
red spots on lobes. det. L. Skog 1977

MO, , , , .

10621 Solanum

Vigorous shrub 3 m. tall on roadside.
Corolla white, visited by a bee.

March 17, 1974

Prov. Chiriquí, Panamá

17PLV 374/746-7

- MO. 10622 fern. Loxoscaphe thecifera (HBK.) Moore
Epiphyte fallen to ground (?). D.L. 1977.
- MO, , , , 10623 Solanum
Shrub 3 m. tall. Corolla white, fruit green.
- MO, , . 10624 Erythrina edulis micheli det. J. Dwyer, 1980
Tree 10 m. tall in coffee plantation. Flowers odorless, standard brilliant orange on outside, greenish within, other petals green.
- MO, , , . 10625 Solanum
Shrub 3 m. tall on roadside. Corolla white.
-
- 17PLV 401/730
10626-10628 Roadside and edge of coffee plantation, ^{lower montane} ~~montane~~ wet forest zone, 3 km. NW of Bogue de Boguete on road to Alto Quiel. alt. 1320 m.
- MO, 5. 10626 Anacard. Mauria glauca Donn. Sm. det. E. Rentería, 1983
Tree 6 m. tall, 15 cm. dbh., with resinous odor.
- MO, , , . 10627 Loranth. Antidaphne viscoidea Poepp. & Endl. det. Kuijt 1976
Sterile parasitic shrub 50 cm. tall, with grasping roots. In # 10626.
- MO, 10. 10628 Quercus
Tree 8 m. tall, 30 cm. dbh.

17PLV 404-5/726

10629-10633

Roadsides and edges of Citrus plantations, "Los Naranjos", 3 km. NW of Boguete. alt. 1250 m.

MO.

10629

Citrus

Cult. tree 5 m. tall. Fruit orange.

March 17, 1974

Prov. Chiriquí, Panamá

17PLV 404-5/726

MO, , .

10630 StruthanthusParasitic vine enveloping canopy of #10629.
Flowers yellow green, lightly fragrant.

MO, , , .

10631 ~~z Sapind, Anacard??~~ Picramnia allenii PorterShrub 4 m. tall. completely enveloped
by #10632 + 10633, ~~etc~~ with very few
leafy twigs left. det. Liesner, 1981

MO, 8.

10632 StruthanthusTangled vine in #10631. Flowers
yellow green, lightly fragrant. Fruit orange.

MO, , .

10633 ~~Struthanthus~~ Peristethium leptostachyum (HBK.) VanShort vine in #10631. Flowers Tieghem
greenish white, lightly pungent fragrant.
det. ~~J. Kuijt~~ T. Choat, 1994

17PLV 421/713

10634-10635 NW side of Boquete. alt. 1160 m.

MO.

10634 Mangifera indica L.

Cult. tree. 5 m. tall.

MO, 5.

10635 StruthanthusParasitic vine in #10634. Flowers
yellow green, lightly fragrant.

17PLV 424-8/688-703

Roadsides.

10636-10653 South side of Boquete. alt. 1050-1100 m.

MO, , .

10636 Inga Pithecolobium tubuliferum (Benth.) P.H.

Tree 8 m. tall, 65 cm. dbh. det. R.L. 1975

MO, .

10637 Psittacanthus ramiflorus (DC.) G. Don det. J. Kuijt
2004Parasitic shrub in #10636 with branches
ca. 1 m. tall. Sepals bright orange at

March 17, 1974

Prov. Chiriquí, Panamá
17PLU 424-8/688-703

at base, yellow at tip, style and filaments red. Flowers odorless.

MO, , , . 10638 *Phoradendron undulatum* Eichl. det. Kuijt 1976

Parasitic shrub on # 10636. Sepals yellowgreen, fruit greenish white.

MO. 10639 *Struthanthus rotundatus* Ruiz. det. T. Croat 1974

Parasitic vine in # 10636. Flowers yellow green, young fruit dull orange.

MO, , , . 10640 *Melastom. Conostegia xalapensis* (Bonpl.) DC.

Shrub 4m. tall, 15 cm. dbh. Flowers fragrant, petals white, anthers yellow. det. R. Liesner

MO, 8. 10641 *Loranth. Phoradendron undulatum* Eichl. det. Kuijt 1976

Common parasitic shrub in # 10640. Sepals light green.

MO, . 10642 *Erythrina berteroana* Urban det. J. Dwyer, 1980

Living fence post, 5m. tall, 25 cm. dbh, mostly leafless. Flowers red.

MO, 7. 10643 *Struthanthus*

Extensive tangled parasitic vine in # 10642. Flowers lightly fragrant, yellowgreen, fruit orange.

MO, 5. 10644 *Bsidium guajaba*

light brown / Gnarled tree with smooth bark, 6m. tall, 20 cm. diam. Flowers white, fragrant, fruit green.

MO, , , . 10645 *Phoradendron undulatum* Eichl. det. Kuijt 1976

Bushy parasitic shrub in # 10644. Ca. 1m. diam. Sepals green, fruit turning greenish white.

March 17, 1974

Prov. Chiriquí, Panamá

17 PLV 424-8/688-703

- MO, , , . 10646 Anacard. Mauria glauca Donn. Sm.
Tree 9 m. tall, 45 cm. dbh. with resinous odor.
Fruit green. det. E. Rentería-A., 1983
- MO, 6. 10647 Oryctanthus Antidaphne viscoidea Poepp. & Endl.
Parasitic shrub to 1½ m. tall with grasping roots. In # 10646. det. J. Kuijt 1976
- MO, 5. 10648 Phoradendron undulatum Eichl. det. Kuijt 1976
Parasitic shrub in # 10646. Sepals light green.
- MO, 9. 10649 Inga punctata Willd. det. R. L.
Tree 10 m. tall, fruit green.
- MO, 21. 10650 Psittacanthus
Large parasitic shrubs to 3 m. diam, common in # 10649. Sepals orange at base, yellow at tip, filaments and style red. Fruit turning black, with milky ~~juicy~~ juice and green cotyledons.
- MO, . 10651 Struthanthus
Parasitic vine in # 10649. Flowers lightly fragrant. Sepals first yellow green then yellow.
- MO. 10652 Tectona grandis L.
Cult. street tree 8 m. tall. Only 2 seen in Boquete.
- MO, . 10653 Struthanthus
Parasitic vine in # 10652. Flowers yellow green to yellow.

March 17, 1974

Prov. Chiriquí, Panamá

17PLV 413/714

10654-10655 Cleared and cultivated gentle slope
1 1/2 km. NW of Boquete on road to El Salto.
alt. 1280 m.

MO, 5.

10654 *Trema micrantha* (L.) Blume det. R. Liemer, 1975
Isolated roadside tree 50 cm. dbh, 5 m. tall
with most of the top broken off. Flowers greenish.

MO, 12.

10655 *Phoradendron robustissimum* Eichl.
Bushy parasitic shrub 1 m. tall in #
10654. Sepals green. Fruit green, turning
greenish white. det. J. Kuijt, 1976.

17PLV 355-360/726-7

10812-10842 Lower montane rainforest zone, 7 km. WNW of
Boquete, past El Salto on road toward
El Hato del Volcán, E slope of Volcán Barú.
alt. 1875-2000 m.

MO.

10812 *Peperomia tetraphylla* (G. Forst.) Hook. & Arn. R.L. 1976.
epiphyte.

MO.

10813 orchid. *Scaphyglottis acostaei* (Schltr.) C. Schöenl.
Epiphyte. Sepals pale yellowgreen with
purple markings. det. B.R. Adams, 1976.

US,

10814 *Cladonia*

US.

10815 lichen

US.

10816 graphid.

US.

10817 " "

US.

10818 " "

US.

10819 lichen

US.

10820 " "

March 17, 1974

Prov. Chiriquí, Panamá

17 PLV 355-360/726-7

US, .	10821	" "
US.	10822	" "
US.	10823	" "
US, 6.	10824	" "
US, .	10825	<u>Cladonia</u>
F.	10826	hepat.
US.	10827	lichen.
US.	10828	stictac.
US, , , , .	10829	lichen
US.	10830	" "
US, 4.	10831	" "
US, 5.	10832	<u>Usnea</u>
F.	10833	hepat.
F.	10834	" "
F.	10835	" "
MO,	10836	moss.
MO,	10837	" "
MO.	10838	" "
MO.	10839	" "
MO,	10840	" "
MO,	10841	" "
MO,	10842	<u>Polytrichum</u>

March 18, 1974

Prov. Chiriquí, Panamá

17PLV 437/377

MO,

10656 moss.

On now dry rock cliff along Río Majagua near small tributary waterfall and swimming hole, 4 Km. N of Pan Am Hwy at David, on road to Boquete.

~~17~~ PMV ^{ca.} 147-154/279-282

10657-10762, 17 km. NE of San Félix on new road to Cerro

10790 Colorado Copper mines. alt. ~~ca.~~ 1000m.

(13-14 km. by road NE of bridge over Río San Félix.)

MO, 7.

10657 Melastom.

Tree 7m. tall. Petals white, filaments red. Fruit turning dark purple.

MO, , , .

10658 Melastom.

Tree 7 m. tall. Buds green.

MO, 9.

10659 Clethra

Tree 8 m. tall, 15 cm. dbh. Flowers white, fragrant.

MO, , , , .

10660 Lacistema aggregatum (Berg.) Rusby

Tree 6 m. tall, 8 cm. dbh. det. H. Slemmon, 198.

MO, , .

10661 Melastom. Miconia nutans Donn.-Smith. det. Wurdack 1976

Shrub 4 m. tall. Fruit green, turning purple.

MO, , .

10662 Piper riparense C. DC. det. Conrad

Shrub 1½ m. tall, strongly aromatic.

MO, 5.

10663 ~~Lacistema~~ Acalypha

Shrub 3 m. tall.

MO, .

10664 Virola

Tree 10 m. tall. Fruit brown mealy, green beneath.

March 18, 1974

241

Prov. Chiriquí, Panamá

17 PMV ca. 147-154/279-282

- MO, 6. 10665 Piper sancti-felicitis Trel. det. J.C. 1974
Shrub 3 m. tall. Spikes erect.
- MO, , , . 10666 Heliconia
Tree 10 m. tall, 20 cm. dbh.
- MO, , , . 10667 Vismia panamensis Duchass. + Walp. det. Robson, 1978
Tree 8 m. tall, 15 cm. dbh.
- MO, 5. 10668 Rub. Sabicea villosa HBK. det. J. Dwyer, 1975
Woody vine to 6 m. Corolla white.
- MO, , , . 10669 Roupala montana Aubl.
Small tree 7 m. tall, 5 cm. dbh. Young fruit green. det. R. Liesner, 1988
- MO, 4. 10670 Vernonia canescens HBK. R.L. 1976.
Arching branched shrub 2 m. tall. Flowers white.
- MO, , , , . 10671 Comp. Simsia panamensis Rob. & Brett.
Shrub 4 m. tall, flowers yellow. det. W.B. D'Arcy
- MO, 6. 10672 Menisperm. Cissampelos pareira L. det. G. Davidse, 1983
Vine to 5 m. on shrub. Flowers green.
- MO, , , . 10673 Orchid. Hexisea
Epiphyte. Flowers odorless, bright orange with a dark red orange shiny area at base of lip within.
- [10674 skipped by mistake]
- MO, , , , . 10675 Cephaelis tomentosa Aubl. det. J. Dwyer, 1975
Shrub 2 m. tall. Bracts red.
- MO, . 10676 fern. Cochlidium linearifolium (Desv.) Maxon ex C. Chr.
Common from ground to 3 m. on mossy trunk of small 10 cm. diam. tree. det. C.H. Haugler 1979
- MO, , , . 10677 Lacistema aggregatum (Berg.) Rusby det. H. Sleumer

March 18, 1974

Prov. Chiriquí, Panamá

17 PMV ca. 147-154/279-282

Tree 5 m. tall, 8 cm dbh. Catkins green at base, greenish white at tip. ~~Fruit~~ Fruit green.

MO, , .

10678

Myrt. Myrcia gatumensis Standley det. R.L.

Shrub 3 m. tall. Buds greenish white.

US, .

10679

Usnea

Common on trees.

MO, , .

10680

Scanth.

Shrubs to 2 1/2 m. tall.

MO, 4.

10681

Erythroxylum aff. lucidum HBK.

Shrub 3 m. tall. Petals greenish white, stamens white. det. T. Plowman, 1978

MO, .

10682

Amaranth.

Herb with slender reddish stems to 1 1/2 m. long.

MO, , , .

10683

Renalmia alpinia (Rottb.) Maas. det. P.J.M. Maas

Herb 3 m. tall. Inflorescence arising from rhizome. Sepals red orange at base, yellow at tip. Fruit red, soft fuzzy, the largest collected 2.5 x 3.3 cm.

MO, , , .

10684

Laciasis

To 2 m. tall

MO, .

10685

Scleria bracteata Cav. det. G. Davidse, 1975

Scrambling to 2 m.

MO, .

10686

fern. Grammitis anfractuosa (Kunze) Proctor

On mossy trunk of shrub. D.L. 1977

MO, , , .

10687

Comp. Inoseris onoserioides (HBK.) Bl. Rob. R.L. 1976

Slender unbranched shrubs to 3 m. tall with tuft of leaves below the large terminal inflorescence. Leaves white

March 18, 1974

243

Prov. Chiriquí, Panamá

17 PMV ca. 147-154 / 279-282

beneath, flowers red.

~~10688~~ Ft.

10688-10697 Opening dominated by
Pteridium and with bare soil.

MO, , , . 10688 Pteridium aquilinum (L.) Kuhn var. caudatum
Common. To 2 m. tall. R.L. 1977 (L.) Sadel.

MO, , , . 10689 Cent. Lisianthus seemannii (Griseb.) O. Ktze
1 m. tall, becoming shrubby. Most
flowers withered, corolla yellow with
lobes $\frac{1}{2}$ white. R.L. 1977

MO, , , . 10690 Comp. Chromolaena laevigata (Lam.) King & Robins.
Shrub 2 $\frac{1}{2}$ m. tall. R.L. 1976

MO, , . 10691 Gnaphalium attenuatum DC.
 $\frac{1}{2}$ m. tall. R.L. 1976

MO, 10692 moss.

On bare soil with ashes.

MO. 10693 Paspalum

MO. 10694 Panicum

MO. 10695 Andropogon

MO, , . 10790 gram.
To 2 m. tall.

MO, , . 10696 Andropogon
To 2 m. tall.

MO, , . 10697 Andropogon
 $\frac{1}{2}$ m. tall.

MO, , . 10698 Comp. Pollalesta discolor (HBK.) Aristeguieta
Tree 10 m. tall. R.L. 1976

March 18, 1974

Prov. Chiriquí, Panamá

17 PMV ca. 147-154/279-282

MO, , , , 10699 ? *Anthurium*Terrestrial. petiole $\sim \pm \times 1$. Spathe green, spadix green or purple. Fruit green.MO, . 10700 *Witheringia* ^{small} *salangaea* L'Her. det. W.G. Druy, 1976
Weak stemmed shrub. Corolla yellow green.MO, 6. 10701 *Melastom. Conostegia bernoulliana* Cogn.
Slender tree 7m. tall. Flowers sweetly fragrant. Petals white, anthers orange.
det. R. Liemer, 1975~~10702~~ 10702-10709 Brushy clearing.MO, , , . 10702 *Siparuna gesnerioides*.
Shrub 2m. tall, sharply, and not pleasantly, aromatic. Fruit red, to 1.9cm. diam.
"flowers" yellow. det. S. Renner, 1976MO, , , . 10703 *Mandevilla*
Vine in shrubs, with milky sap. Flowers with sweet odor. Corolla ~~tube~~ yellow, the tube red within.MO, , , . 10704 Comp. *Heterocondylus vitalbis* (DC.) King & Robins.
Vine, weak stemmed, to 2 1/2 m. ~~tall~~ high.
Flowers very pale purple. R.L. 1976MO, 4. 10705 *Piper sanctifelicis* Trel. det. J.C.
1m. tall. Spikes erect.MO. 10706 *Apoc.*
Vine in shrubs, without milky sap(?).
Flowers odorless, corolla lobes pale yellowish with purple markings, callous orifice yellow.

March 18, 1974

Prov. Chiriquí, Panamá

17 PMV ca. 147-154 / 279-282

MO, , , .

10707 MoninaShrub 2 m. tall. Flowers blue and white.
Fruit turning purple-black.

MO, , .

10708

Gesner. Besleria hirsuta (Oerst.) Hanst.

Shrub 1 m. tall. Corolla bright orange.

det. L. Skog 1978

March 19, 1974

MO, , , .

10709

Siparuna gesnerioides

det. S. Renner, 1996

Shrub 4 m. tall. Receptacle yellow

MO, 7.

10710

Smilax panamensis MorongVine climbing into tree. Flowers green,
anthers white. det. R. Liesner, 1975

MO, 36.

10711

bamboo. Rhipidocladum racemiflorum (Steud.) McClureArchling or scrambling to 5 m. Whorls
35-45 cm. apart. det. X. Londoño, 1990

MO, .

10712

Cuphea appendiculata Benth. det. S. Graham, 1991

1 m. tall. Flowers bright orange.

MO, .

10713

Lab. Salvia pteroura Brig. det. R. Liesner, 2007

1½ m. tall. Corolla beautiful dark blue.

MO, , , .

10714

Clusia salvinii Donn. Sm. det. D'Arcy, 1980

Tree 7 m. tall. Fruit green.

MO, , , .

10715

Machaerium seemannii Benth. det. J. DwyerCoarse woody vine climbing into
10714. Fruit green.

MO, , , .

10716

Struthanthus orbicularis (HBK.) Blume det. Kuijt 1976

Parasitic vine attached to both # 10714 + 10715.

MO, , .

10717

Quarata lucens (HBK.) Engler R.L. 1977

Shrub 2 m. tall. Fruit and receptacle green.

March 19, 1974

Prov. Chiriquí, Panamá

17 PMV ca. 147-154 / 279-282

MO, , , . 10718 Rub.

Little branched shrub 5m. tall, 8cm. diam, with habit of Pentagonia. Fruit first green, then brown when splits.

MO, , . 10719 Rub.

Tree 5m. tall, much branched from base (stump sprouts ??). Young fruit pink and green, turning brown.

MO, 11. 10720 Phoradendron piperoides (HBK.) Treel. det. Kuijt 1976
Parasitic shrub to 50cm. diam. in #10719.
Inflorescence orange.

MO, 18. 10721 Zinowiewia costaricensis Lundell det. R. Liesner, 1970
Tree 10m. tall, 15cm. dbh. Flowers green, wings of fruit turning greenish yellow.

MO, , . 10722 Oryctanthus alveolatus (HBK.) Kuijt det. Kuijt 1976
Small parasite on #10721. Sepals dark red.

MO, 5. 10723 ~~Flacourt~~ Casearia sylvestris Sw. var. silvestris
Tree 7m. tall, 15cm. dbh. Flowers pale green.

MO, 10724 moss.
festooned off twigs of tree.

MO, , , . 10725 Dolicearpus
Woody vine. Fruit green and reddish.

U.S. 10726 lichen.

F. 10726-a On branches of tree.
MO, hepat. w/ 10726.

10727 Moss.

On small branches of tree.

F, 5. 10728 hepat.

On trunk of small tree.

March 19, 1974

17 PMV ca. 147-154/279-282
Prov. Chiriquí, Panamá

- F. 10730-a *hepat* w/ 10730.
- MO, , . 10729 *Asplenium auritum* Sw. det. D.L. 1977
Withered. On trunk of small tree.
- US, 5. 10730 lichen.
Mossy trunks of shrubs and small trees.
- F, , , . 10731 *hepat.*
On twigs of tree.
- US. 10732 lichen
on twigs of tree.
- MO. 10733 orchid.
Epiphyte on trunk of small tree. Fruit
green, flowers yellow.
- MO, . 10734 *Inga sapindoides* Willd. det. R.L. 1975
Sterile tree 8m. tall, 15cm. dbh.
- MO, 6. 10735 Loranth. *Phthirusa pyrifolia* (HBK) Eichl. det. Knipt 1976
Parasitic shrub 1½ m. tall in # 10734.
Sepals dark red. Fruit green with yellow tip.
- MO, , . 10736 Malpigh. *Stigmaphyllon ellipticum* (HBK.) Juss.
Vine in small trees. Wings green and red,
finally brown. det. T. Croat, 1975
Scheidw. det. O. Telles, 1986.
- MO, , . 10737 *Dioscorea* ^{*D. mexicana*} *macrostachya* Benth. det. F. Ayala 1976
Vine in small trees. Sepals dark purple.
- MO, , , . 10738 Orchid. *Brassia gissaudiana*
Epiphyte on tree trunk. Flowers odorless, sepals
yellow green with dark purple markings.
Fruit green.
- MO, , , . 10739-10744 On upper branches of tree.
10739 Orchid.
Flowers orange, fading to yellow and remaining on green fruit.

March 19, 1974

17 PMV ca. 147-154/279-282

Prov. Chiriquí, Panamá

- US. 10743-a lichen ~~sp.~~
- US, , . 10740 *Parmelia*
- US. 10741 lichen
- US. 10742 " "
- MO, 10743 moss. *Entodon jamesonii* (Tayl.) Mitt.
- US. 10744 *Parmelia*
- MO, 7. 10745 Myrt. *Eugenia biflora* (L.) DC. det. R.L.
Tree 8 m. tall, 10 cm. dbh. Petals and filaments white, young fruit green.
- MO, , , , 10746 Malpigh. *Tetrapteris discolor* (G.F.W. Meyer) DC.
Woody vine to 7 m. in tree. det. T.C.
- MO, 5. 10747 *Oryctanthus occidentalis* (L.) Eichl. det. Kuijt 1976
Parasitic shrub on stem of # 10746.
Fruit green at base, white in middle, greenish purple at tip.
- MO, , , , . 10748 *Saurauia*
Tree 8 m. tall, 8 cm. dbh. Flowers fragrant, petals white, anthers yellow.
- MO, , , . 10749 *Gram.*
To 3 m. tall.
- MO, . 10750 Malpigh. *Stigmaphyllon ellipticum* (HBK.) Juss. ^{det. J. Croat, 1975}
Vine to 2 m. Flowers odorless, petals bright yellow.
- MO, , . 10751 Markgr. & Ruyschia *phylladenia* Sandw. ¹⁹⁸²
Robust vine in tree. Fruit red. det. H.G. Bedell,
- MO, . 10752 *Hirtella racemosa* Lam. det. R. Liesner, 1975
Bushy shrub 4 m. tall. Fruit red and green.
- MO, , , , . 10753 Comp. *Pollalesta discolor* (HBK.) Aristeguieta
Tree 10 m. tall, 20 cm. dbh. Common.

R.L. 1976

March 19, 1974

Prov. Chiriquí, Panamá

17 PMV ca. 147-154 / 279-282

MO, 8.

10754 Phoradendron angustifolium (HBK.) Nutt.

Parasitic shrub in # 10753, seen in the center of the small crown of most trees of it and seemingly restricted to this species. Leaves orange green. Fruit white at base, orange at tip. det. J. Knist 1976

MO, MAD, 8.

10755 Solanum nudum Dunal det. S. Knapp, 1985

MADw 32574. Shrub 3 m. tall. Fruit green.

MO, .

10756 Dicranopteris pectinata (Willd.) Underw.

Forming tangled viny masses or climbing to 5 m. det. D.L. 1977.

MO, , .

10757 Pteris biaurita L. D.L. 1977

MO, , , .

10758 Blechnum occidentale L. f. var. occidentale D.L. 1977

MO, .

10759 Laciasis

Scrambling, to 2 1/2 m. tall.

MO, , , , .

10760? Dryopteris Thelypteris scalaris (Christ) Alston

Fronds to 1.6 m. long. det. D.L. 1983

MO, .

10761 Comp. Ayapana elata (Steetz) K. & R. R.L. 1976

1 m. tall. Flowers greenish white.

MO, 7.

10762 Pteris quadriradiata Retz. D.L. 1977

Petiole ca. 1 m. long, blade ca. 1 m. long.

17 PMV ca. 123/240

MO, .

10763 Gustavia perperba

alt. 650 m. 10 km by road NE of bridge over Rio San Felipe.
Cult. tree 15 cm. dbh., 8 m. tall. No flowers or fruit seen. Fruit said to be edible and ripe in August. With Artocarpus, bananas, coffee and other fruit trees near a house. 11 km. NE of San Felipe along new road to Cerro Colorado copper mines.
alt. 650 m.

March 19, 1974

Prov. Chiriquí, Panama

17PMV 163/098

10764-10769 Pasture along Pan. Am. Hwy. $1\frac{1}{2}$ km. NW of turnoff to Nancito.
grove of *Corozo oleifera* in low spot. alt. 5 m.

MO, , . 10764 *Crocentia cujete* L. det. A. Gentry, 1974

Tree 6 m tall. Fruit green, to 25 cm. diam., seeds light brown, pulp white but turning black during drying. Several trees.

MO, , . 10765 *Gustavia superba*

Single tree 6 m. tall, 15 cm. dbh., does not appear to have been planted. Petals yellow with rose spots. Filaments yellow at base, dark rose at tip, anthers yellow.

MO. 10766 *Solanum lanceifolium* Jacq.

Scrambling vine. Corolla lobes white, hairs on outside purple in bud.

MO, , , . 10767 *Coix lacrymajobi* L.

Less than 1 m. tall. Beads white, black or green depending on age.

MO, , . 10768 *Piper pseudo-fulgineum* C. DC. det. Conrad

Shrub in shade of *Corozo oleifera*. 1 m. tall.

MO, . 10769 *Corozo oleifera*

Common palm in low spots. Massive stems to ca. 2 m. tall. The ones in the low spot ± erect, but two nearby on a dryer gentle slope had decumbent stems to up to 2 m. long before turning up. The crown, old leaf bases and adventitious roots completely cover the stem. Crown with ca. 20-30 leaves, usually held flat, but sometimes twisted so the end

March 19, 1974

251

Prov. Chiriquí, Panamá

17 PMV 163/698

is vertical. Leaf with 65-75 pinnae per side.
~~Petiole~~ Blade ca. 2.85 m. long, petiole
ca. 45 cm. long. Inflorescences from
among the leaf bases. ♀ inflorescence
a dense cluster, the fruit turning
bright orange.

Prov. Coclé, Panamá

17 PNU 528-530/198

MO, 8.

10770

Samanea saman (Jacq.) Merrill
Pithecolobium saman

"machapali." Large wide-spreading ~~field~~ tree,
forming open groves in flat along Río Chico,
along Pan Am. Hwy, 1/2 km. S of Natá. alt. 10 m.
Looking much like groves of Quercus macrocarpa
in former ~~prairie~~ savanna in Wisconsin.
The grass beneath the trees (all Panicum
maximum?) is cut for cows. Corolla pink,
filaments white below, dark pink distally.
Fruit first green, then brown.

10771-10775 Weedy grassy roadside along Pan. Am. Hwy.
at Río Chico bridge. 1/2 km. S of Natá.

MO, 4.

10771

Crotalaria retusa L.

R.L. 1975.

Petals yellow with purple markings on outside
of the standard. Pods turning brown and
seeds rattling.

MO.

10772

Panicum

Common.

March 19, 1974

Prov. Coclé, Panamá

17 PNU 528-530/198

R.L. 1978

- MO, , . 10773 Legum. Desmanthus virgatus (L.) Willd. s.l.
 MO. 10774 Legum. Vigna adenantha (Meyer) M.M. & S. det. J. Lackey
 Herbaceous vine. Flowers white and purple. 1979
 MO, . 10775 Nelsonia brunelloides (Ham.) Kuntze

17 PNU 908-911/264-6

alt. 20m.

10776-10785

Pasture along ^{the} Río Hato at Pan Am. Hwy bridge.
 Scattered trees and fringe of forest along rio.

- MO, , . 10776 Guazuma ulmifolia Lam.
 Tree 7 m. tall.
 MO, , , . 10777 Oryctanthus alveolatus (HBK) Kunt det. Kunt 1976
 Parasitic shrub on # 10776. $\frac{1}{2}$ m. tall. Fruit green.
 MO, , , . 10778 Struthanthus orbicularis (HBK) Blume det. Kunt 1976
 # Parasitic vine on Guazuma ulmifolia (not collected). Flowers yellow green, odorless.
 MO, . 10779 Anacardium Spondias Mombin L. det. T. Croat
 Tree 8 m. tall, 40 cm. dbh. Flower buds greenish white.
 MO. 10780 Loranth. Psittacanthus calyculatus (DC.) G. Don det. Kunt 1976
 Parasite shrub $1\frac{1}{2}$ m. tall, in # 10779. Leaves often with reddish tint. Flower buds red.
 MO, , . 10781 Struthanthus orbicularis (HBK) Blume det. Kunt 1976
 Tangled viny mass in Mangifera indica (not collected). Several other mangos around a probable old house site. This one with several masses of Struthanthus, a few with small parasites and one large healthy tree with none.

March 19, 1974

253

Prov. Coclé, Panamá

17PNU 908-911/264-6

det. R. Liesner, 1975

- MD, , . 10782 Phyllanthus acidus (L.) Steels
Tree 8 m. tall, ~~40 cm.~~ 40 cm. diam. at base.
Probably at an old house ~~site~~ site, with
Cocos nucifera and Mangifera indica.
Fruits forming masses along branches,
waxy, juicy yellow. Much shrunken
during drying, I think they were about
2 cm. diam. and slightly lobed.
- MD, , . 10783 Myrt. Eugenia acapulcensis Steud.
Tree 6 m. tall, 15 cm. dbh. det. R. L., 1983
- MD, , . 10784 Sciadodendron excelsum Griseb. det. Jun Wen
Tree 10 m. tall, 30 cm dbh. Twigs
thick, soft. One branch with huge
compound leaves, tree otherwise
leafless with new leaves beginning to
come out from tips of twigs. Flowers
yellow green, with musty odor.
- MD, , , , . 10785 Legum.
Tree 8 m. tall, 30 cm. dbh. Flowers purple.

Prov. Panamá.

Ca. 17PPV 158/398

3 km. NE of San Carlos.

- 10786-10789 Pasture savanna 1 1/2 km. from Pan. Am.
Highway ~~Mar~~ ^{Mar} road. alt. ca. 40 m. Dominated
by Hyparrhenia rufa and Byrsonima crassifolia.
- MD, , , , . 10786 Byrsonima crassifolia (L.) HBK.
Tree 7 m. tall. Flowers yellow or orange.
- MD, , , , . 10787 Curatella americana L.
Shrub 3 m. tall. Flowers fragrant.

March 19, 1974

~~254~~

Prov. Panamá, Panamá

ca. 17PPV 158/398

MO, , , 10788

Lygodium venustum Sw. ! D. G. 1977
Vine to 4 m.

MO, , , 10789

Myrsine
Shrub 3 m. tall.

#10790 filled: see p. 243.

#10791-10811 filled: see p. 230

#10812-10842 filled: see pp. 238-239

March 22, 1974

Canal Zone, Panamá

17PPV 601/904

MO,

10843 moss.

Steep bank of lawn, on clay. Ancón. alt. 20 m.

MARCH 24, 1974

Canal Zone Panamá

17PPV 577/917

US, 4.

10844-10845 Partly shaded bank, clay and weathered rock, Diablo Heights. alt. ~~10~~ m.10844 Cladonia

MO,

10845 moss

17PPA 484/022

10846-10850 Summit Gardens. Alt. 80 m.

MO, , .

10846 Hibiscus schizopetalus det. Fryxell

Unpruned, cult. shrub 3 m. tall, with arching branches. Flowers bright red, odorless.

MO.

10847 Loranth. Oryctanthus occidentalis (L.) Eichl.

Parasite on # 10846. Leaf veins purple beneath.

Sepals green.

det. J. Knipt 1976

MO, , .

10848 Loranth. Oryctanthus alveolatus (HBK.) Knipt

det. Knipt 1976

Parasite on # 10846. Fruit green with purple stripes.

MO, .

10849 Hibiscus schizopetalus det. Fryxell

Unpruned cult. shrub 3½ m. tall, with arching branches. Flowers red, odorless.

MO.

10850 Loranth. Phthirusa= Parasite on # 10849, ~~not~~ coming from base of another sterile Loranth. ~~??~~ Young fruit green.
↓ Oryctanthus

March 25, 1974

Same tree coll. with young flowers on
May 7, 1974 pub # 11491.

Canal Zone, Panamá

17 PPA 450/055

10851-10852 Edge of secondary tropical moist forest along
Baillard Hwy, # 3 Km. SE of Gamboa. alt. 60m.

MO, 8

10851 *Blighia sapida* K.D. Koenig det. T. CroatTree 12 m. tall, 50 cm. dbh., several others nearby,
near old house site. Fruit said to be eaten
when ripe and splits. Fruit with yellow
green but mostly red orange, ca. $8 \times 4\frac{1}{2}$ cm.

MO.

10852 fern *Thelypteris poiteana* (Bory) Proctor D.L. 1977"Akee" said to be the cause of so many poisonings that being exterminated
in the Canal Zone. Fruit splitting and falling in mid April. Large
creamy aril and shiny black seed, only 1/3 developing.

17 PPA 468/038

10853-10854 Secondary tropical moist forest along Baillard
Hwy., 2 Km. NW of Summit Garden, alt. 75m.

MO.

10853 *Annona spraguei* Safford det. R.L.!Tree 10 m. tall, 25 cm. dbh., nearly leafless
and with only one old fruit.

MO, 38.

10854 *Oryctanthus spicatus*Bushy parasitic shrub with branches to 1 m.
long, on # 10853. Fruit green with purple markings, sepals dark
red. ~~at base a net of small biting ants~~
with offensive odor

17 PPA 473/032

10855-10856 Along Baillard Hwy at turnoff to Cerro Semaphore
radar tower, 1 1/2 Km. NW of Summit Garden. alt. 75m.

MO, 21.

10855 *Luehea seemannii* Triana & Planch.Roadside tree with 3 stems, largest 25 cm. dbh., A
common tree in surrounding secondary tropical moist
forest. Capsule green, turning brown or reddish tan.
Leaves brown beneath.

MO, 16.

10856 *Oryctanthus spicatus*Parasitic shrub 0.75 m. tall. on # 10855. Sepals dark red, fruit
green with purple stripes.

March 26, 1974

Canal Zone, Panamá

17PPA 473/032

MO, .

10857-10860 Summit gardens. Alt. 80 m.

10857 *Epoc. Ervatamia cumingiana* (DC.) Mgf. ^{det. A. Gentry 1977}Cult. shrub $1\frac{1}{2}$ m. tall. Corolla lobes white, tube green. Flowers odorless both day and night.

det. T. Croat 1974

MO.

10858 Loranth. *Oryctanthus occidentalis* (L.) Eichl.Parasite on # 10857. Sepals ~~light~~ green on outside, light purple within. Fruit yellow green, green and purple ringed.

MO, , , .

10859 *Ixora findlaysoniana* WallichCult. shrubs to 4 m. tall. Corolla lobes white, tube greenish white, with thick sweet odor. Labelled: "*Ixora findlaysoniana*. White *Ixora*, Ceylon." det. J. Dwyer 1977.

MO, //.

10860 Loranth. *Phthirusa pyrifolia* (HBK.) Eichl.

Parasite on # 10859, with grasping roots. Sepals dark red. Fruit dark green in middle, yellowgreen at base and tip; turning orange. det. J. Kuijt, 1985

Prov. Colón, Panamá

17PPA 372/440

MO, .

10861 Convolv. *Ipomoea stolonifera* (Cyn.) Gmel. ^{R.L. 1977}

Sandy beach along thin coconut grove, María Chiquita. alt. 2 m. Creeping vine. Corolla very pale yellowish, darker yellow green at base within.

March 26, 1974

Prov. Colon, Panama

17PPA 371/437-8

10862-10868

Thickets along Río Madre Vieja at María Chiquita.
alt. 5 m.~~10862-10868~~

MO, 5.

10862

Lacistema aggregatum (Berg.) Rusby
Shrub 3 m. tall. det. H. Steumer, 198-

MO, , , .

10863

Montrichardia arborescens (L.) Schott det. T. Croat, 1975
Erect stems to 3 m. tall, very spiny below.

MO, .

10864

Cocos nucifera L.

Commonly cult. and probably spontaneous.
The one collected with lowest leaf at 2 m.,
probably about as young as they begin flowering.
Leaves ca. 4 m. long, the ones on taller trees,
esp. the less ~~less~~ vigorous ones, seem to be
generally smaller, 11 ^{serotine} leaflets on the leaf
collected. Trunk leaning at base, with
adventitious roots emerging near ground level,
45 cm. diam. at base, 30 cm. diam. ~~at base~~ below
lowest leaf. Flowers yellow green, fragrant.

MO, .

10865

Manicaria paccifera

Stem upright, branched near base and with
mass of ~~adn~~ adventitious prop roots up to 1/2 m.,
stem ca. 15 cm. diam, covered with rotting leaf bases.
Crown with 10 leaves, blades of leaves ca. 4 m. long.
Spath brown, beginning to separate but still
enclosing inflorescence.

March 26, 1974

Prov. Colón, Panamá

17PPA 371/437-8

MO, 8.

10866 *Ficus trigonata* L. det. C.C. Berg, 1983

Large tree with spreading crown and several trunks. Figs green, with lighter spots, tinged with purple.

MO, , , .

10867 *Solanum subinerme* Jacq.

Shrubs 2 m. tall. Flowers with heavy sweet odor. Corolla blue.

MO.

10868 *Corozo oleifera*

± stemless and upright, others in vicinity with creeping stems and upright portion to 1½ m. high. The leaf collected with 85 leaflets on one side, blade 3.60 m. long. Male inflorescences dead. ♀ inflorescence a dense hard cluster of orange fruits protected by the spiny leaf bases.

17PPA 334-5/369

10869-10874 Pasture along road to Portobelo, 2 km. NE of Puerto Pilon. alt. < 5 m.

MO, , .

10869 (*Polypodium*) *Niphidium crassifolium* (L.) Kell. D.L. 1977

At crotch of 20 cm. diam. living fence post tree.

MO.

10870 *Polypodium polypodioides* (L.) Watt. var. *polypodioides*

On 20 cm. diam. living fence post tree. D.L. 1977.

MO, , , .

10871 *Melastom.*

Shrub 3 m. tall. Petals light pink, berries purple.

March 26, 1974

Prov. Colón, Panamá

17 PPA 334-5/369

MO, 4.

10872

Dryetanthus cordifolium (Presl) Urb. det. T. Croat 1974

Parasite on # 10871.

MO, , , .

10873

Dryetanthus spicatus

Parasite on # 10871.

MO, , , ,

10874

Solanum ♂ Torr. var.

Shrub 2 m. tall. Corolla white, fruit green.

March 27, 1974

261

~~Panama~~ Canal Zone, Panama

17PPA 157/339

WIS, , .

10875 *Sargassum*

Attached to coral, just below low tide level.
Bahía Limón, 1/2 km. SE of Fort Sherman
housing area.

17PPA 156/361

10876-10877 Fort Sherman breakwater. ^{Toro Point.} Rocky and with
low vegetation. alt. 3 m.

MO, , , .

10876 *Canavalia maritima* (Aubl.) Thon. det. R.L., 1975
Extensively creeping vine. Flowers light
purple, odorless.

MO, , , .

10877 *Solanum* & *Micranantha*.

Vine. Fruit turning orange.

17PPA 099/301

MO.

10878 *Pseudobombax septenatum* (Jacq.) Dugand
Tall tree with green striped bark. Leafless,
fallen flowers only. Forest along road 82,
1/2 km. SE of Fort San Lorenzo. alt. < 5 m.

17PPA 098/300

10879-10888 Along Chagres River, near mouth at end of
road 82, 1/2 km. S of Fort San Lorenzo. Sea level.

MO, .

10879 *Bombac. Pachira aquatica* Aubl.

Tree 8 m. tall, 30 cm. dbh, with buttresses at
base. Sterile. det. W. Alverson, 2007

MO, 12.

10880 *Phoradendron inaequidens* Rusby

Parasitic shrub in # 10879. Sepals
orange, fruit orange. det. J. Kuijt, 1997

March 27, 1974

Canal Zone, Panama

17PPA 098/300

- MO, , , . 10881 Annone glabra L.
Tree 10 m. tall. Flowers yellowish, petals red within at base. Fruit green.
- MO, 4. 10882 Oryctanthus occidentalis
Parasite in # 10881. Leaf veins purple beneath. Fruit yellowgreen at base, green at middle and with purple ring at tip.
- MO, 6. 10883 Phoradendron piperoides (HBK.) Trel. det. Kuijt 1976
Parasitic viny shrub with hanging branches to 1½ m. long. Fruit yellow green. In # 10881
- MO, , . 10884 Legum. Pterocarpus officinalis Jacq.
Tree 10 m. tall. Sterile. det. R. Liesner, 1978
- MO. 10885 Oryctanthus spicatus alveolatus (HBK) Kuijt det. Kuijt 1976
Parasitic shrub on # 10884.
- MO, , . 10886 Orchid. Caularthron bifamellatum (Reichb.f.) Schultes
Epiphyte. Pseudobulbs hollow, one of the four split open was inhabited by ants. Fruit green, with purple tinge. det. E. Christenson, 1986.
- MO, , , , 10887 Acanth.
Corolla light blue.
- MO, , , , 10888 Aerostichum aureum L. D.L. 1977.
Clumps, to 3 m. tall. Up to 7 fertile or partly fertile leaflets per side.
-
- ca. 17PPA 113/316
- MO, 14. 10889 Terminalia amazonia (J.F. Gmel.) Exell
Large tree with several ½ m. dbh. trunks from base. 20 m. tall. Wings green with reddish tinge.
^{Tropical moist} Forest along Chagres Road (road 5-8), 2 Km. NE of Fort San Lorenzo. alt. 50 m.

March 27, 1974

263

Canal Zone, Panamá

17PPA 147/324

10890-10891 Along Gatun Road, 2 km. S of Fort Sherman. alt. < 5 m.

MO, , .

10890 Anthurium denudatum Engl. det. T. Croat, 1975
Epiphyte fallen from tree in Prioria
copallifera, Manicaria saccifera swamp.
Spathes green, spadix purple.

MO, , , , ,
 , , , , ,
 , .

10891 Solanum
Vigorous vine on roadside with Acrostichum aureum. Flowers lightly fragrant.
Corolla lobes white with purple hair on outside.

17PPA 189/271

10892-10894 Disturbed roadside forest, Atlantic Riding Club.
1½ km. N of Gatun Locks bridge alt. < 5 m.

MO, 5.

10892 Bignon. Cydista aequinoctialis (L.) Miers var. ae.
Woody vine covering canopy of small
det. H. tree. Flowers lightly fragrant. Corolla tube
Gentry, 1974 yellow within, lighter yellow on outside;
lobes pale purple with darker markings.

MO, , , .

10893 Tripalis
Tree 8 m. tall with smooth flaky bark,
others of this species nearby to 15 m. tall.
Infested with badly biting ants living
in the hollow twigs. Fruit light yellow
green, changing to bright red. det. R. L. 1975

MO, , , .

10894 Inga sp. vera Willd. ssp. spuria (Willd.) J. León.
Sprawling tree 8 m. tall with trunks spreading
or lying on ground. Filaments white.

March 27, 1974

Prov. Colón, Panamá

17 PPA 342-3/386-7

- on lying on ground ~~Filaments white~~. alt. 9 m.
- 10895-10909 Thickets and weedy roadside along Portobello road at bridge over Rio Viejo. 4 km. NE of Puerto Pilón
- MO, . 10895 Cissus sicyoides L. det. T. Croat, 1975
Vine in trees. With broomlike growth, galls?
- MO, , , . 10896 Borag. Tournefortia bicolor Sw. det. R. Liesner, 197-
Woody vine. Flowers with sweet odor. Corolla white.
- MO. 10897 Anthurium bakeri Hook. f. det. T. Croat, 1975
Epiphyte on large branch of Ficus.
- MO, , , . 10898 Bign. Paragonia pyramidata (Rich.) Bureau
Woody vine in tree. Fruit green. det. A. Gentry, 1984
- MO, , , , 10899 Solanum & Torvum
Shrub 1½ m. tall. Corolla white.
- MO, 8. 10900 Ficus insipida Willd. det. C.C. Berg 1976
Large tree, common along bank of Rio Viejo. Figs of two ages, larger ca. 4 cm. diam, younger ones ca. 1.5 cm. diam., both with pink flowering layer.
- MO, , . 10901 Comp. Baltimora recta L. R. L. 1976.
Heads yellow.
- MO, , , 10902 Legum.-Papil. Pueraria phaseoloides Benth. R. L. 1975
Vine. Flowers odorless, variously pale and darker purple marked.
- MO, 4. 10903 Passiflora foetida
Vine. Flowers white and purple.
- MO, , . 10904 Passiflora
Vine in shrubs. Fruit green, rind tough, to 5.3 x 3.6 cm.
- MO, , . 10905 Lygodium venustum Sw. ! D. L. 1977
Vine to 3 m. in shrubs.

March 27, 1974

265

Prov. Colón, Panama

17PPA 342-3/386-7

MO, , , , .

10906 Clibadium asperum (Aubl.) DC. R.L. 1976

Shrub 4 m. tall. Heads turning dark green.

MO, 9.

10907 Euclastom.

Shrub 4 m. tall, 4 cm. diam. Petals white, anthers yellow.

MO, , .

10908 Dillen.

Vine. Accrescent sepals light orange, seed black with white aril.

MO.

10909 Acalypha arvensis Poepp. + Endl.

Det. R. Liesner, 1975

17PPA 334-5/369

10910-10920 ~~Weedy~~ Weedy, brushy pasture with strip of trees along creek, along road to Portobelo, 2 km. NE of Puerto Pilón. alt. < 5 m.

MO, , .

10910 ~~Solanum~~ Solanum jamaicense Mill.

Shrub 2 m. tall. Fruit turning bright orange.

MO, .

10911 Citrus sinensis (L.) Osbeck R.L. 1980.

Bushy tree 5 m. tall, prob. originally planted. Flowers white, fruit green.

MO, , .

10912 Oryctanthus cordifolius (Vest.) Urb. det. Knijs 1976

Parasite in #10911, with an ant nest at base.

Fruit green with purple ring at tip.

MO, 5.

10913 Oryctanthus occidentalis (L.) Eichl. det. Knijs 1976

Parasite in #10911. Fruit with yellow ring at base and tip, green ring around middle.

MO, MAD, , , .

10914 Hyptis verticillata Jacq.

MADw 32575. Shrub 2 1/2 m. tall. Common

March 27, 1974

Prov. Colón, Panamá

17PPA 334-5/369

shrub in weedy parts of pasture. Same area, but not same plant, as Tyson & Nee # 7315 being collected for cancer research.

MO, , , . 10915

Panicum

In low spot.

MO, 5.

10916

Melastom.

Tree 12 m. tall, 60 cm. dbh. along creek.

MO, , , .

10917

Passiflora quadrangularis L. det. A. Gentry, 1975

Vine. Flowers with light, unpleasant fragrance, various shades of purple. Along creek.

MO, , , , .

10918

Pentagonia wendlandii Hook. det. J. Dwyer, 1975

Unbranched shrub 2 1/2 m. tall. Calyx red, corolla yellow. Along creek.

MO, , , .

10919

Poulsenia armata (Miq.) Standl. I.C.C. Berg 1976

Sterile tree with buttresses prolonged into roots trailing along ground. Sap milky. 10 m. tall. Along creek.

MO, .

10920

Calathea lutea

Herb 2 m. tall, leaves white below. Along creek. Inflorescence erect, bracts green and dull orange green, flowers yellow.

March 28, 1974

267

Prov. Panamá, Panamá

17 PPA ca. 898/072

alt. 25 m.

10921-10932

Tobacco plantation weeds, irrigated and well cultivated. Between Pan Am Hwy and Rto Pacora, 3 Km. NE of Pacora.

MO, , , ,

10921 Nicotiana tabacum L.

Large plantation, irrigated. Plant clammy viscid, Corolla lobes pink, tubepale yellowish, stigma green.

MO, , , .

10922 Echinochloa

MO, , .

10923 Comp. Baltimorea recta L. R.L. 1976

Heads yellow.

MO, .

10924 Eclipta alba (L.) Hassk. R.L. 1976

Flowers white.

MO.

10925 Phyllanthus

MO, .

10926 Portulaca oleracea L. det. R. Liesner, 1975

Fleshy. Flowers yellow.

MO, .

10927 Chamaesyce hyssopifolia (L.) Small R.L. 1976

MO, , .

10928 Eleusine indica

MO.

10929 Croton hirtus L'Hér. det. R. Liesner, 1975

MO.

10930 Acalypha arvensis Boepp. + Endl. " "

MO.

10931 Emilia

Heads light purple.

MO.

10932 Comp. Eleutheranthera ruderalis (Sw.) Sch. Bip.

Flowers yellow.

R.L. 1976.

March 28, 1974

Prov. Panamá, Panamá

10933-10935 Open pastureland along Pan. Am. Hwy, 1½ km E of El Llano. alt. ca. 20 m.

MO, .

10933 Guazuma ulmifolia Lam.

Tree 6 m. tall, 15 cm. dbh., living fence post.

MO, 6.

10934 Phoradendron quadrangulare (HBK.) K. & U. det. Kuijt 1976

Bushy parasitic shrub 1 m. tall, in # 10933.

Sepals yellowgreen, rest of plant green, only a few branches with young flowers or buds.

MO, 6.

10935 Oryctanthus spicatus alveolatus (HBK.) Kuijt det. Kuijt 1976

Parasitic shrub in # 10933. Sepals dark red, fruit green with purple stripes.

10936-11003, Premontane wet forest along El Llano-Carti road,
11005, 16-18½ km. by road N of Pan Am. Hwy at El
11006 Llano. alt. ca. 400-450 m. s. n. m.

MO.

10936 Palm. Geonoma

2 m. tall. Inflorescences from axils of lower leaves, hanging. Rachis and peduncles dark pink, fruit brown.

MO, 5.

10937 Rub. Psychotria alboviridia Krause det. C. Hamilton, 1984

Small tree. Fruit green, turning orange.

MO, 6.

10938 Rub.

Slender shrub 4 m. tall. Inflorescence hanging, flowers pale yellowish.

MO, .

10939 Rub.

Small tree 5 m. tall. Fruit turning orange, then dark red.

March 28, 1974

269

Prov. Panamá, Panamá

- MO, . 10940 Rub.
Shrub? Corolla blue, odorless.
- MO, , , , 10941 Rub.
Shrub? Corolla white.
- MO, . 10942 Melastom. Conostegia montana (Sw.) D. Don
Slender tree 5 m. tall. Buds only. R. L. 1977
- MO, , , 10943 Gesner. Drymonia allopectoides Hand. det. L. Skog 1977
(covering branch)
~~Dense~~ epiphytic vine. Calyx lobes purple,
corolla white with purple markings within
the base very thick. Flower with faint sweet odor.
- MO, 4. 10944 Melastom.
Shrub 4 m. tall. Flowers odorless. Petals and
calyx pink, filaments white.
- MO, . 10945 Myrt.
Tree 5 m. tall, 4 cm. diam. young fruit green.
- MO. 10946roid. Heteropsis oblongifolia Kunth det. T. Croat, 1975
Vine climbing into tree. Spadix green, 6.5 x 2.5 cm.
- MO, 5. 10947 Melastom.
Slender shrub 3 m. tall. Inflorescence hanging.
- MO, MAD, , 10948 Myrsin Cybianthus schlimii (Hook. f.) G. Agostini
MADw 32576. Slender unbranched shrub
with tuft of leaves at tip, 4 m. tall, 3 cm. dbh.
Twelve ascending inflorescences arising from
between the two verticils of leaves. Flowers lightly
fragrant, light purple when first open, quickly
turning dull yellow.
- MO. 10949 Annon.
Fallen twig. Flowers rusty brown.

March 25, 1974

Prov. Panamá, Panamá

B. stricta L. Skog, det. Skog, 1978

- MO, , , . 10950 Besner. Besleria nervipraebers Wiehl., ined
Shrub 1½ m. tall, leaf veins purple below.
Corolla bright orange. det. R.E. Skog 1978
- MO, . 10951 Besner. Columnea pulchra (Wiehl.) ^{L. Skog} det. L. Skog 1978
Epiphytic shrublet. Leaves red beneath.
Calyx bright orange fuzzy. Seems to be
a common epiphyte in big trees.
- MO, , . 10952 Besner. Columnea billbergiana Benth. det. L. Skog 1977
Epiphytic shrublet. Corolla bright red.
- MO, , . 10953 Mapania assimilis Koyama det. J. Davidse, 1975
- MO, . 10954 Ischnosiphon "rhizanthus" sp. nov.
Many stemmed clump of herbs 1½ m. tall.
Flowers lilac. det. H. Kennedy, 1975
- MO, , , . 10955 Rub.
Small tree? Fruit green.
- MO, , , . 10956 Eric. Cavendishia capitulata Donn.-Sm.
Epiphytic shrub. Calyx waxy white. Fruit
juicy, bluish white, 0.9 cm. diam., tasting ^{det. J. Luteyn} like a very insipid blueberry. Seeds brown. 1975
- MO, , , . 10957 Elex chiriguensis Standl. det. W. Hahn, 1986
^{I. yuru marginis Cuatrec. 1988 det. W. Hahn} Small epiphytic tree 10 m. tall with 15 cm.
diam. trunk. The base a reticulum of roots
"strangling" the trunk of the large host
tree and with ~~down~~ a 15 cm. diam. "root" descen-
to the ground 10 m. below. Sterile.
- MO, , , . 10958 Rub. Psychotria pithecolia Standl. J. Dwyer 1976
Epiphyte with fleshy leaves. Inflorescence red.

March 28, 1974

Prov. Panamá, Panamá

- MO. 10959 Gesner. Columnea cruenta Morley
Epiphyte. Leaves red marked below. Calyx
green, Corolla yellow in bud. det. H.E. Skog, 1977
- MO, , , 10960 Clusia dukei Mag. det. W.G. D'Arcy 1980
Epiphytic tree. Fruit green. Same plant as
Tyson & Nee # 7320 collected same day.
- MO, MAD, . 10961 Palm. Pholidostachys pulchra Wendl. ex Burret
MADw 32577. 5 m. tall to base of crown, 6 cm.
diam. Crown with 12 leaves, petiole 110-120
cm. long from base. Inflorescence not yet blooming
from first node below lowest leaf. Fruit
green, obscurely ribbed. ^{det.} de Nevers, 1986
- MO, . 10962 Mabea
Shrub. Fruit red.
- MO. 10963 Apoc.
Vine. Corolla yellow green in bud.
- MO. 10964 Anthurium lancifolium Schott det. T. Croat, 1975
Terrestrial. Spathe green, spadix green at
base, white at tip.
- MO, , , . 10965 Cyclanth.
Slender vine to 5 m. in trees. Spathe creamy.
Young fruit green, when ripe bright orange
and 7 x 3 cm.
- MO. 10966 (~~Adiantum~~) Lindsaea lancea var. falcata (Dryand.) Rosenst.
Terrestrial. D.L. 1977
- MO, . 10967 Palm. Geonoma concinna Burret det. G. de Nevers
Clump of 6 wiry stems to 2 m. tall. Fruit
pale green.

March 28, 1974

Prov. Panamá, Panamá

- MO. 10968 Rub.
Shrub. Inflorescence blue and white.
- MO. 10969 Melastom.
Shrub 1 m. tall. Young fruit green.
- MO, 9. 10970 Markgraf & Norantea anomala HBK.
Epiphytic vine?? Fruit green, becoming reddish,
splitting to reveal the light yellow seeds in
a lighter yellow pulp. Sacopera sessilis (L.O.W.)
Betell, det. Betell, 1981
- MO, 10971 Cespedezia macrophylla Seem.
Sterile slender tree.
- MO. 10972 Clusia liesneri Mag. det. D'Arcy 1980
Buds pink and white.
- MO, 8. 10973 Guttif. Toumouita weddelliana Pl. & Tr.
Tree 10 m. tall, 15 cm. dbh. Flower buds green.
Inflorescence protected by the two subtending
leaves which are connate at the edges to
form a "spathe" det. D'Arcy, 1980.
- MO, 10974 Cactus Epiphyllum grandilobum (Weber) Br. & Rose
Epiphyte. det. J. Solomon, 1981
- MO. 10975 Bromel.
Epiphyte.
- MO, 10976 Peperomia blephariphylla Trel. & Yuncker R.G. 1976
Epiphyte vinelet on branch of large tree.
Leaves greenish white beneath. P. ciliaris C. DC.
det. R. Callejas, 19--
- MO, 10977 Orchid. Encyclia ionocentra
Epiphytic clump on branch of large tree.
Flowers odorless, petals yellow green with
purple spots, lip white and purple, top of

March 28, 1974

273

Prov. Panamá, Panamá

column yellow. Whole flower changing to a darker yellow green with purple spots.

MO, , .

10978 Annon. Anaxagorea allenii R. E. Fr. det. R. L., 197-

Tree 8 m. tall, 10 cm. dbh. Flowers rusty brown.

MO.

10979 Palm. Oenocarpus

Ca. 10 m. tall, 10 cm. diam. Leaf blade ca. 3.3 m. long, ca. 55 leaflets per side. Sheath not split all the way to base (lowest 15 cm. unsplit), forming a semi-crown shaft. Old inflorescence from 3rd node below lowest leaf.

MO, , .

10980 Nephrolepis rivularis (Vahl) Krug det. D. L. 1977

Epiphyte.

US, 4-

10981 Graphid.

At ca. 10 m. from ground on tree trunk.

MO.

10982 Desmancus isthmicus Bailey det. G. de Nevers, 1986.

Viny. A complete leaf pressed, 19 leaflets (with blade) per side. The vine had recently been cut down, the inflorescence still included within the splitting spathe. The few unrotten young flowers are yellow.

MO, 20.

10983 Virola megacarpa A. Gentry det. A. Gentry 1977

Large tree. Fruit brown, splitting, aril red.

MO, , .

10984 Solanum & Miconia

Vigorous sterile vine to 4 m. on shrubs.

MO, , .

10985 Guttif. Clusia oedematopoides Mag.

Tree 12 m. tall, 20 cm. dbh, trunk very fluted.

Fruit green

det. D'Arcy 1980

MO.

10986 Rub. Amplidasya longicalycina (Dwyer) C. M. Taylor

Fruit and calyx green. det. C. M. Taylor, 2001

March 28, 1974

Prov. Panamá, Panamá

- MO. 10987 Palm. *Synechanthus warscewiczianus* H. Wendl.
4 m. tall, crown with 7 leaves. Petiole 45-50 cm. long. One complete leaf blade pressed. Fruit bright red, very juicy, with a soft sac surrounding the light brown stone. det. Henderson & Ferreira 2000
- MO, , , . 10988 Melastom. *Miconia smaragdina* Naud.
Shrub. Midrib of leaf purple beneath. Fruit turning purple. det. R. Fiesner, 1975
- MO, , , . 10989 Meliac. *Guarea macropetala* Penn., sp. nov.
Tree 8 m. tall, 20 cm. dbh., cauliflorous. Recently felled and flowers seem to be faded from purple and cream. [see # 10394] Type.
- MO, . 10990 Dillen.
Woody vine into canopy.
- MO, 12. 10991 ~~Gesner?~~ *Gibsoniothamnus allenii* A. H. Gentry
Large epiphytic shrub (or woody vine $\frac{1}{2}$) at 8-12 m. on large tree. Leaves thick, dark green above, light (almost yellowish-) green beneath. Pedicel, calyx and corolla bright pink purple. Style white. Young fruit green. det. A. Gentry, 1974
- MO. 10992 Cyclanth.
Epiphytic vine. Leaves slightly asymmetric. Spathe light brown, stamens white, stamens cream.
- MO, , , . 10993 Burser. Meliac. *Guarea grandifolia* DC.
Tree 15 m. tall, 25 cm. dbh. Fruit dark red, splitting, seed bright orange. Many fruits inhabited by ants. det. T. D. Pennington

March 28, 1974

11004 filled
see p. 276

275

Prov. Panamá, Panamá

- MO, 9. 10994 Annon. Anaxagorea allenii R.E. Fries?
Tree 10 m. tall, 15 cm. dbh. det. R. Liesner, 197-
- MO, 4. 10995 Melastom.
Shrub ~~3~~ 1 m. tall. Inflorescence red, petals
pink in bud.
- MO, . 10996 Cydanth.
Terrestrial. Inflorescence brown.
- MO, 5. 10997 Myrsin.?
Tree 10 m. tall, 15 cm. dbh.
- MO, 7. 10998 Markgrav.
Large epiphytic shrub (?). Fruit red with
yellow tip. det. Maas + van Setten, 1987
10999 Annon. Guatteria rotundata P. Maas + van Setten
(J. Aronson, 1978)
Tree 16 m. tall, 25 cm. dbh. Flowers yellow green.
- MO, , . 11000 Rub. Rudgea pittieri Standl. det. J. Dwyer, 1976
Tree? Corolla lobes white, throat yellow green.
- MO, 12. Holotype NY. 11001 ~~Saurauia~~ ^{Type Marcgravia panamensis S. Dressler, No. 6: 256, 1996.} Marcgravia aff. sericea de Roon
Large woody vine. Fruit green. det. J. Utley, 1980
- MO, , , . 11002 Apoc. Tabernaemontana undulata Vahl
Shrub 3 m. tall. Leaves very pale green below.
Flower buds reddish. det. A. Leeuwenberg
- MO, , . 11003 Ochnac. Ouvatea valerii Standl.? R.L. 1977
Tree 8 m. tall, 10 cm. dbh. Flowers sweetly
fragrant. Calyx and inflorescence reddish and
yellowish. Petals and stamens yellow.
- MO. 11005 ~~11005~~ Gesner. Codonanthe luteola Wiehl. det. D.T. Skog 1978
Epiphyte. Leaves succulent. Calyx reddish,
corolla yellow in bud.
45. 11006 lichen on tree trunk.

March 28, 1974

Prov. Panamá, Panamá

MO, MAD,

11004

Cecropia cf. ~~scutata~~ ^{scutata} Cuatr. det. C.C. Berg ¹⁹⁷⁶MADw 32578. Slender unbranched tree ~~2~~ m.tall. Ant infested. Petioles to $\frac{1}{2}$ m. long.

Leaves purple beneath. Inflorescences erect.

Premontane wet forest along El Llano-Cartí

road, 14 km. by road N of Pan Am. Hwy at

El Llano. alt. ca. 450 m.

Cecropia heterochroma C.C. Berg & F. Franco

det. C.C. Berg, 199 -

March 31, 1974

11005-11006 scep. ~~275~~ 277

Canal Zone, Panamá

17PPA 489/024

11007-11009 Summit Gardens. alt. 90 m.

MO, , .

11007 ²Flacount. Casearia arguta HBK.

Cult. shrub with three stems, the largest 12 cm. diam., 4 m. tall. Fruit green. det. H. Sleumer, 198-

MO, 13.

11008 Phthirusa pyrifolia (HBK.) Eichl. det. Kuijt 1976

Parasitic shrub 1 m. tall in # 11007. Tepals dark red.

MO, , .

11009 Oryctanthus occidentalis (L.) Eichl. det. Kuijt 1976

Parasite in # 11007. Most plants with leaf veins purple beneath. Tepals dark green outside, purple within. Fruit light green at base and tip, dark green in middle.

~~April 1, 1974~~

April 1, 1974

Canal Zone, Panamá

17PPV 600/909

11010-11013 Ancón. alt. 10 m.

MO, , .

11010 Casaurina equisetifolia L. det. R. Liesner, 1989

Cult. tree 15 m. tall, 30 cm. dbh.

MO, 7.

11011 Oryctanthus spicatus alveolatus (HBK.) Kuijt det. Kuijt 1976

Parasite in # 11010. Tepals dark red. Fruit green, purplish toward tip.

MO, , , .

11012 Struthanthus orbicularis (HBK.) Blume det. Kuijt 1976

Parasitic vine in # 11010. Flowers yellow green, slightly fragrant.

MO, 8.

11013 Struthanthus Phthirusa adunca (Meyer) Maguire det. Kuijt 1976

Weak branched, almost viny, parasitic shrub in # 11010. Flowers greenish white.

April 2, 1974

Canal Zone, Panamá

17 PPV 592/902

MO, , 6 .

11014 Andira inermis (W. Wright) Kunth ex DC.

Snarled tree on roadside, 6 m. tall. Quarry Heights, alt. 60 m. . Flowers purple, odorless. Fruit green.

MO, 7.

11015 Struthanthus orbicularis (HBK.) Blume

Parasitic vine in # 11014. Flowers yellow green, fragrant. det. J. Kuijt 1976

17 PPA 420-1/084-7

11016-11020

Secondary tropical moist forest along road up to Cerro Pelado radar station. 1/2 km. NW of Gamboa. alt. 100 m.

MO, 24.

11016 Inga pauciflora W. & D. det. R. L. 1975

Tree 8 m. tall, 15 cm. dbh. Filaments white.

MO, 28.

11017 Hirtella americana L.

Small tree 7 m. tall with several trunks. Petals white, sepals purple.

MO.

11018 Bombacopsis pessilis (Benth.) Pittier

Tree 8 m. tall, 25 cm. dbh. Fruit an unruly mass of fluffy light brown fuzz. Seeds brown. Same tree collected in flower Dec. 29, 1973 sub # 9058.

MO, 7.

11019 Terminalia amazonia (J. F. Gmel.) Exell

Tree 12 m. tall, 20 cm. dbh. Flowers yellow green with faint odor. det. R. Liemer, 1975

MO, 17.

11020 Legum. Lonchocarpus velutinus Benth. R. L. 1978

Tree 8 m. tall, 10 cm. diam, branched repeatedly. Fruit green.

Apr. 2, 1974

279

Canal Zone, Panamá

17PPA 423/088

- 11021-11030 Secondary tropical moist forest near summit of Cerro Pelado, alt. 200-220 m. 1 km. N of Gamboa.
- MO, . 11021 Hymenaea courbaril L.
Tree 20 m. tall, 30 cm. dbh. Fruit and leaves fallen to ground.
- MO, 12. 11022 Fernstroemia tepezapote Schltdl. + Cham.
Tree 7 m. tall, 10 cm. diam. det. A. Gentry, 1975
- MO, , , . 11023 Smilax lanceolata L. det. R. Liesner, 1975
Vine in small trees. Buds only.
- MO, . 11024 Rub. Coccocypselum hirsutum DC.
Creeping herb on roadside clay bank.
Corolla light blue. Fruit bright dark blue, spongy, seeds brown. det. J. Dwyer, 1975
- MO, 9. 11025 Virola
Tree 10 m. tall, 15 cm. dbh. Inflorescence tan-orange, fragrant.
- MO, 27. 11026 Pera arborea Mutis
Tree 12 m. tall, 30 cm. dbh. Fruit light green. Maybe a tree coll. before.
- MO, 4. 11027 Melastom.
Shrub 3 m. tall at edge of radar clearing.
Fruit turning purple.
- MO, 4. 11028 Henriettella fascicularis (Sw.) Triana det. R. L. 1974
Small tree 5 m. tall. Fruit green.
- MO, , . 11029 Roupala montana Aubl. det. R. Liesner, 1988
Sterile tree 6 m. tall, 20 cm. dbh.
- MO, 9. 11030 Apoc. Lacmellea panamensis (Woodson) Markgr.
Tree 14 m. tall, 15 cm. dbh. Sap milky. Fruit green, turning orange.
det. J. Zarucki

April 2, 1974

Canal Zone, Panama

I7PPA 421/082

MO, , , ,

, , , .

- 11031 *Bignon. Xylophragma secmannianum* (Kuntze) Sandw.
 Woody vine in ~~small~~ *Xylopia* trees at
 edge of secondary tropical moist forest
 along road to Cerro Pelado radar
 station, alt. 50m. $\frac{1}{2}$ km. W of Gamboa.
 Mostly leafless, with new leaves beginning to
 emerge and a very few old ones remaining.
 Flowers odorless, corolla light purple,
 tube pale yellow within. det. A. Gentry, 1974

Saw a Loranth, probably *Oryctanthus* in a
 Lauraceous tree, but above 7m. & couldn't reach it. on the Cerro Pelado
 Radar road.

April 3, 1974

281

Canal Zone, Panamá

17PPA 486-8/020-024

11032-11043 Summit Gardens. alt. 80-90 m.

MO, , , . 11032 Brownea

Cult. shrub with several stems to 10 cm. diam., 6 m. tall. Flowers bright orange, in large clusters on trunk or twigs. Fruit green.

MO, 6. 11033 Oryctanthus spicatus alveolatus (HBK.) Kuijt.

Parasitic shrub with branches to 0.75 m. long, on # 11032. det. J. Kuijt 1976

MO, 7. 11034 Phthirusa pyrifolia (HBK.) Eichl. det. J. Kuijt 1976

Parasitic shrub on # 11033. Sepals dark red.

One other Brownea shrub seen was heavily parasitized by Oryctanthus spicatus.

MO. 11035 Bursera? Picramnia dwyeri Porter, det. R.L. 1981

Cult. shrub 4 m. tall, 10 cm. diam. Fruit red.

MO, , . 11036 3 Flacourtia jangomas (Lour.) Rauschel

Cult. shrub 3 m. tall, 10 cm. diam. Branches, especially the vigorous young ones from the trunk, are very spiny. det. H. Steumer.

MO, , . 11037 Oryctanthus occidentalis

Parasite in 11036.

MO. 11038 Phthirusa

Parasite on # 11036. Fruit green, orange at base.

MO, 5. 11039 Calliandra magdalenae (Bert.) Benth. ? R.L. 1975

Cult. shrub 4 m. tall with spreading crown. Filaments white at base, pink at tip.

Apr. 3, 1974

Canal Zone, Panama

17PPA 486-8/020-024

MO, 6.

11040 Phthirusa

Parasite on #11039. Tepals dark red. Fruit dark green, yellow at base and tip, turning orange.

MO, , .

11041 Oryctanthus occidentalis

Parasite on #11039. Leaves, at least the younger ones, with purple veins beneath.

MO, 6.

11042 Oryctanthus spicatus

Parasite on #11039. Tepals green with purple tips. Fruit green with purple stripes.

MO.

11043 Phthirusa

Parasite on 11042. Tepals dark red.

17PPA 449/057

MO, 8.

11044 Lacistema aggregatum (Berg.) RusbyShrub 4 m. tall, catkins light green. Bushy edge of secondary tropical moist forest along Baillard Hwy., 3 km. SE of Gamboa. alt. 50 m.
det. H. Slemmer, 198-

April 4, 1974

Canal Zone, Panamá

17PPA 482-3/022-3

11045-11047 Summit Gardens. alt. 80m.

MO.

11045 Arundina

Cult. terrestrial canelike orchid 2½ m. tall. Many plants in abed but only 1 blooming. Flowers odorless. Sepals pink, lip dark pink with yellow area in center.

MO.

11046 Aspasia

Probably cult. Attached to tree trunk in shade. Flowers lightly fragrant. Five sepals green with light purple lines. Lip light yellow, darker yellow at base. Column white with tinge of purple.

MO,

11047 Notylia pentachme

Spontaneous? Numerous plants on twigs of thick Hibiscus ^{rosa-}~~sinensis~~ in front of old herbarium building. Sepals and column green, lip white. Flowers odorless.

17PPA 481/019

MO,

11048 Solanum lanceifolium Jacq.

Vine to 5 m., edge of secondary tropical moist forest along Navy Communications road, ¼ km SW of Summit Garden. alt. 70 m. fruit green.

April 6, 1974

Canal Zone, Panama

17 PPA 298.9/220-1

11049-11085 End of Pipeline Road, 19 km. NW of Gamboa.
alt. 25-50 m. at bay of Gatun Lake, 1 km.
S of Pueblo Limón. Secondary tropical moist forest
along Pipeline clearing.

MO, 22.

11049 Ludwigia pedicoides (Humb. & Bonpl.) Hars. det. P. Raven
S. Zardini, 1989
Floating in water at edge of bay. Forming tight
rosettes. Flowers bright yellow.

MO, 10.

11050 Hydrilla verticellata (L.f.) Royle R.L. 1977
Aquatic, common, forming zone along
edge of bay.

MO.

11051 Pontederia rotundifolia L.f. R.L. 1977
In tangle of sedges at edge of water.
Flowers light blue with yellow spots.

MO, 6.

11052 Scleria eggersiana Boeckl. det. G. Davidse, 1975
Forming stand 2 m. tall at edge of bay.

MO, .

11053 Cyperus odoratus L. det. G. Davidse, 197-
Edge of bay.

MO.

11054 Panicum
Edge of bay.

11055-11059 Open grassy area along pipeline and path.

MO.

11055 Panicum maximum
Abundant.

MO, .

11056 gram.

MO, .

11057 Paspalum

MO.

11058 (Dicromena) Rhynchospora nervosa (Vahl) Boeckl.
Bracts white at base. det. G. Davidse, 197-

MO.

11059 Pityrogramma calomelanos (L.) Link
on clay. D. Hellinger 1977

Apr. 6, 1974

285

Canal Zone, Panama

17PPA 298-9/220-1

MO, 9.

11060 Dillen.

Extensive woody vine to tops of 8 m. tall trees. Calyx orange, aril white, seed black.

MO, 5.

11061 *Erythroxylon panamense* Turcz. det. D'Arcy 1974
Shrub 3 m. tall, fruit green.

MO, , .

11062 *Adiantum lucidum* (Cav.) Sw.

terrestrial.

D.L. 1977

MO, .

11063 *Palm Bactris gasipaes* HBK. det. R. Juncosa, 1983
MADw 32579. Forming loose clump of 6 stems to 7 m. tall, 8-12 cm. diam. The rings of sharp black spines partly weathering away lower on trunk. The whole leaf pressed with blade 3.10 m. long, 76 leaflets on one side. Of crowns counted, one each with 5, 6, 7 and 8 leaves. Inflorescences in the axils of dead leaves from which the blade has fallen, the spiny leaf bases falling about the time the inflorescence falls. Leaves irregularly pinnate, the lower leaflets in each group ~~separated~~ at about a 45° angle, the distal ones ± horizontal. Inside of spathe cream.

MO, 13.

11064 *Legum. Dioclea reflexa* Hook. f. R.L. 1975

Extensive woody vine, stem 10 cm. diam. at base. Fruit green, turning brown black.

MO, , , .

11065 *Blechnum occidentale* L. f. *occidentale*

terrestrial.

D.L. 1977

April 6, 1974

Canal Zone, Panama

17PPA 298-9/220-221

- MO, . 11066 Dimerocostus strobilaceus O.Ktze. ssp. strobilaceus
Canes to 3 m. tall. Flower white with yellow
area with tinge of red on lip. det. P.J.M. Maas 1979
- MO, , . 11067 Lygodium venustum Sw. ! D.L. 1977
Slender vine in shrubs.
- MO, 4. 11068 Acalypha
Shrub to 3 m. tall. Aments green.
- MO, . 11069 Passiflora foetida L. det. A. Gentry, 1975
Slender vine in grassy opening.
- MO, , , . 11070 Philodendron scandens C. Koch & Sello det. T. Croat 979
Tangled viny mass cascading out of tree.
Spathe purplish green outside, purple
within, especially at base.
- MO, 6. 11071 Machacarium milleflorum Pittier R.L. 1978
Woody vine in small tree.
- MO, , . 11072 Malpigh. Heteropterys laurifolia (L.) Adr. Juss.
det. T. Croat 1975 Woody vine in small tree. Fruit light greenish.
- MO, 7. 11073 Miconia
Tree 6 m. tall, 10 cm. dbh. Fruit turning purple.
- MO, , . 11074 Astrocaryum standleyanum Bailey ! A. Gentry
Solitary tree 15 cm. dbh., 4 m. to base of crown.
Common. Trunk internodes thickly set with
long spines set at various angles. Crown
with ca. 14 leaves, lower ones $\pm$ horizontal,
blade ca. 3 m. long. Inflorescences from
upper leaves, drooping. Fruit turning
orange, the pulp orange ~~is~~ even when the
nearly mature fruit are green outside.

Apr. 6, 1974

287

Canal Zone, Panama

17 PPA 298-9 / 220-221

MO, , , , .

11075 *Solanum hayesii* Fern.

Shrub 4 m. tall, trunk spiny, 8 cm. diam. Fruit green, corolla white.

MO, 5.

11076 *Connarus*

Extensive woody vine in small trees. Fruit green. Petals white, lightly fragrant.

MO, 6.

11077 *Strychnos toxifera* Schomb. ex Benth.
Woody vine. Fruit green.

MO, 4.

11078 *Guatteria amplifolia* Triana + Planch.
Shrub 5 m. tall.

MO, .

11079 *Maripa*

Woody vine. Corolla pale purple, odorless.

MO, 7.

11080 Laurac. *Nectandra martinicensis* ^{N. umbrosa} Mez. det. Rohrer

det. H. v. d. Werff, 1983 Tree 10 m. tall, 20 cm. dbh. Petals white.

MO, , , , .

11081 *Croton*

Shrub 5 m. tall.

MO, 31.

11082 *Cestrum megalophyllum* Dunal det. M. Noel, 1999

Large shrub 5 m. tall with abundant flowers, on stems to 5 cm. diam. Leaves somewhat fleshy. Flowers closed at 2:00 PM when collected, open in plastic bag by 9:00 P.M. when pressed, ~~with~~ when open with light penetrating & musty fragrance.

Corolla Lobes white with faint purple tinge, throat almost closed by the green stigma.

MO, 7.

11083 Laurac. *Nectandra globosa* (Aubl.) Mez.

det. H. v. d. Werff, 1982 Large tree. Flowers white, fragrant.

N. hihua det. Rohrer

Apr. 6, 1974

Canal Zone, Panamá

17PPA 298-9 / 220-221

MO, , . 11084 Legum. Pithecolobium barbosianum Standl.

Tree 30cm. dbh. with spreading crown. Inside of fruit orange, aril white, seed blue-black.

MO, 17.

11085 Melastom. Miconia poeppigii Triana

Tree 12 m. tall. Fruit turning from green through shiny blue to dark purple, to 0.8 cm. diam, 0.5 cm. high. det. F. Almeda, 2008

17PPA 335-7 / 174-5

11086-11099

11101

Along Río Agua Salud near Pipeline Road bridge, 13 km. NW of Gamboa. alt. 45 m. Tropical moist forest.

MO, 6.

11086 Gram.

Large arching grass to 3 m. tall. Stem green with purple mottling.

MO, 5.

11087 Polypod. Pleopeltis percurssa (av.) Hook. & Grev.

Epiphytic vine.

D. L. 1977

MO, .

11088 Peperomia obscurifolia C. DC.

Epiphyte.

R. L. 1976

MO.

11089 PhysalisGravel bar. Corolla pale yellowgreen with purple spots. ~~Anther~~ Anthers purple.

MO, 5.

11090 Panicum

Gravel bar.

MO, , , .

11091 Zectaria rheosora (Baker) Chr.

Gravel bar.

D. L. 1977

MO.

11092 Zectaria incisa var. pilosa (Fee) Morton

Rocky bank.

D. L. 1977

MO, .

11093 fern. Cyclopheltis semicordata (Sw.) J. Smith D. L. 1977

Rocky bank.

Apr. 6, 1974

Canal Zone, Panama

17 PPA 298.9 / 220-221

- MO. 11094 Bromel.
Epiphyte. Leaves green with white mottling.
Fruit and inflorescence green with
white bloom., fruit ~~to~~ 1.5 cm. diam.
- MO, . 11095 Blechnum
Upper sandy ~~beach~~ beach.
- MO, . 11096 Adiantum lucidum (Cav.) Sw.
Upper sandy beach. D.L. 1977
- MO, . 11097 fer. Dicranoglossum panamense (C. Chr.) Gome
Epiphyte. D.L. 1977
- MO. 11098 fer.
Epiphyte.
- MO, 7. 11099 *Lythr. Adenaria floribunda HBK.
Bushy shrub with arching branches.
Petals white with orange dots. Common
along road at edge of forest.
- MO. 11101 Comp. Ayapana elata (Steetz) K. & R.
River bank. det. R.L. 1976
-
- 17 PPA 359 / 150
- MO, 51. 11100 Morac. Perebea xanthochyma
Tree 10 m. tall, 20 cm. dbh. with abundant
bright red orange fruit, juicy and
slightly tart, ca. 1.4 cm. long by 1.2 cm.
wide at widest place. Edge of premontane
wet forest along Pipeline Road, 10 km. NW
of Gamboa. alt. 120 m. near Río Macho.

Apr. 7, 1974

Canal Zone, Panamá

IFPPA 299/218-221

- 11102-11120 Secondary tropical moist forest at end of Pipeline Road, 19 Km. NW of Gamboa, 1 Km. S of Pueblo Limón. On bay of Gatun Lake. alt. 25-50 m.
- MO, 5. 11102 Hacourt. ? Casearia guianensis (Aubl.) Urb. det. H. Sleumer, 198-
Shrub 3 m. tall. Fruit red and pale green.
- MO, . 11103 Lygodium radiatum Prantl D.L. 1977
- MO, , , . 11104 Dicranopteris pectinata (Willd.) Underw. D.L. 1977
Forming viny tangles at edge of clearing.
- MO, 4. 11105 Rub. Psychotria marginata R. & P. det. J. Dwyer
Shrub 1 m. tall. Fruit green.
- 11106-11120 Along ^{small} creek
- MO, 4. 11106 Rub. Psychotria pittieri Standl. det. J. Dwyer, 1975
Shrub 1/2 m. tall. Corolla tube white with light yellow lobes.
- MO, 7. 11107 fern. Cyathea petiolata (Hook.) Tryon det. D.L. 1977
Tree fern with trunk 1 1/2 m. tall, 4 cm. diam.
- MO, . 11108 fern. Tectaria rheosora (Baker) C. Chr. D.L. 1977
- MO, 6. 11109 Cyperac. Calyptracarya glomerulata (Brongn.) Urb.
Sandy gravelly area. det. G. Davidse, 1975
- MO, . 11110 fern. Thelypteris serrata (Cav.) Alston D.L. 1977
Grassy opening at mouth of creek.
- MO, 4. 11111 Boehmeria
Grassy opening at mouth of creek.
- MO, , . 11112 fern. Salpichlaena volubilis (Kaulf.) J. Sm. det. D.L. 1977
Sterile.
- MO, . 11113 Guttif. Toumoutopsis nicaraguensis Pl. & Tr. det. D'Arcy, 1980
Shrub 2 1/2 m. tall. Fruit bright red.
- MO, 5. 11114 fern. Cyclopetis semicordata (Sw.) J. Sm. det. D.L. 1977
rocky streambed. streambank.

Apr. 7, 1974

Canal Zone, Panama

17 PPA 299/218-221

- MO, 18. 11115 fern. *Dennstaedtia obtusifolia* (Willd.) Moore
Rocky creek bank. Petiole 30-45 cm. long,
blade ca. 1-2 m. long. det. D.L. 1977
2. 11116 *Melastoma*.
Rocky streambed. Flowers white.
- MO, 1. 11117 fern. *Salpichlaena volubilis* (Kaulf.) J. Sm.
Vine. Leaves stiff. Sterile. D.L. 1977
- MO, 23. 11118 fern. *Nephrolepis erinacea* (Karst.) Tryon var. *erinacea*
Tree fern, spiny trunk 3 m. tall, 8 cm.
diam, crown with 7 leaves. Frond
2.6 m. long from lowest pinnule to tip.
Rocky creek. det. D.L. 1977
- MO, 8. 11119 fern. *Tectaria mexicana* (Fée) Morton
Rocky creek bank. D.L. 1977
- MO. 11120 fern. *Dicranoglossum panamense* (C. Chr.) Gómez
Epiphyte on fallen twig. D.L. 1977

17 PPA 304/201

- 11121-11131 Large grassy opening with much bare
clay, 1 km. off Pipeline Road, 2 km. from
end, 17 km. NW of Gamboa. alt. 60 m.
- MO, , , . 11121 *Vismia latiseptala* N. Robson, det. Robson 1978.
Shrub 5 m. tall with bright orange sap.
- MO, 11. 11122 *Oxyanthus occidentalis* (L.) Eichl.
Parasite in 11121. Rachis yellow green,
fruit purple at tip and base, green ring in
middle and yellow green rings between.
- MO, 5. 11123 *Croton tunitatis* Millsp. det. S. Ginzburg

April 7, 1974

Canal Zone, Panamá

ca. 17 PPA 304/201

- MO. 11124 Andropogon
 MO, , . 11125 Sporobolus
 MO, . 11126 Phyllanthus
 MO, , . 11127 Cyperac. Fimbristylis dichotoma (L.) Vahl
 Common. det. G. Davidse, 1975
 MO. 11128 Polygala paniculata L.
 Flowers light purple.
 MO, , . 11129 Paspalum
 MO, , , . 11130 Comp. Pterocaulon virgatum (L.) DC. R.L. 1977
 MO. 11131 Comp. Vernonia cinerea (L.) Less. R.L. 1976
 Flowers blue.

ca. 17 PPA 311/204

- MO, , , . 11132 Astrocaryum alatum Loomis ! A. Gentry
 Edge of tropical moist forest, 2 km from end of
 Pipeline Road, 17 km. NW of Gamboa. alt. 50 m.
 Stem 8 cm. diam. near base, rest covered with
 exceedingly spiny leaf bases. Crown at ca. 2 m. from
 ground, 11 leaves, glaucous beneath, rather stiff.
 Sections of blade often separate at base but united
 distally. Inflorescences from among the leaves, ~~5~~
 5 in fruit on this plant, erect to horizontal. One
 seedling found in the mass of leaf bases.

Apr. 9, 1974

Canal Zone, Panamá

17PPV ⁵¹⁰~~511~~/983

11133 - 11135 Paraíso. Alt. 50 m.

MO, , , .

11133 Leg. - Mimos. *Albizzia guachapele* (HBK.) Dugand? R.L. 1975
Large cult. tree. The lichens # 8463-8469 were collected off this tree Nov. 29, 1973.~~11133~~ 11134-11135 alt. 0-3 m. on trunk of 75 cm. diam. cult. *Swietenia*.

US, , , .

11134 lichen

US.

11135 lichen

17PPA ca. 476/045

11136-11138 Secondary tropical moist forest with *Scheelea zonensis*, *Astrocaryum standleyanum*, *Gustavia superba* along Río Chico Masambi (now dry) and "abandoned" road C-29, 1 km. from Gaillard Hwy, 2 km. ENE of Summit Gardens. alt. 125 m.

MO, .

11136 *Chrysophila warscewiczii* (Wendl.) Burret det. A. Gentry MADW 32580. Tree 7 m. tall to base of crown, 11 cm. dbh. Lower 5 m. of trunk with downward pointed spines, at base a small mound of roots and spiny roots. Crown with 26 live leaves and 5 dead ones still hanging on. Another tree with a 2 m. tall trunk with 18 leaves and one with a 1 m. tall trunk with 14 leaves. Six live leaves low in crown with petioles 1.2, 1.2, 1.35, 1.50, 1.65, 1.80 m. long, the variation in petiole length evidently not related to age. Petiole bases split. Petiole

April 9, 1974

Canal Zone, Panama
ca. 17PPA 476/045

sheath soon splitting into a tough fibrous material.
A single old inflorescence with fruit fallen, from
among upper leaves. Leaves whitened beneath.
Ant. infested.

- MO, . 11137 Chrysophila warscewiczii (Wendl.) Burret det. A. Gentry
Numerous seedlings beneath # 11136, surely the same
species and probably from this tree. Easily told from
the numerous Scheelea seedlings by the conspicuous
white ^{same as on adult plant} tomentum on undersides of leaves, as well
as ~~the~~ soon obviously palmately compound. Roots
tough, shallow, spreading. The spiny roots
pointed upward.
- MO, 4. 11138 Inga sapindoides Willd. det. R. L. ~~ca~~
Small tree 5 m. tall. Fruit shiny green.

ca. 17PPA 474/040

- MO, 5. 11139 Muntingia calabura L. R. L. 1979
Small tree 5 m. tall. Viscid. Petals white, fruit
turning red when ripe, juicy, with yellowish seeds,
~~sweet~~, to 1.1 cm. diam. Along "abandoned" road C29,
1/2 km. from Gaillard Hwy, 2 km NW of Summit Garden. alt.
Edge brushy second growth tropical moist forest. alt. 100m.

17PPA 450/055

- MO, 4. 11140-11141 Brushy roadside along Gaillard Hwy, 3 km SE of Gamboa. alt. 50m.
11140 Anacard. ? Spondias mombin L. det. T. Croat
Tree 8 m. tall, 25 cm. dbh. Flowers faintly fragrant. Petals white.
- MO, 13. WIS. 11141 Phoradendron quadrangulare (HBK.) K. & U. det. J. Kuijt 1976
bushy masses parasitic in 11140. To 1 1/2 m. diam. Whole plant green.
Tepals & fruit (4 mm. diam.) yellowgreen.

note! This
info. left off all labels.
corrected at WIS.

April 9, 1974

295

Canal Zone, Panamá

17PPV 587/892-5

11142-11149 Balboa. alt. 10 m.

MO, .

11142 Apoc. Thevetia peruviana

Cult. shrub 5 m. tall. Corolla tube and edges of lobes yellow green, thin part of corolla lobe salmon. Fruit green.

MO, .

11143 Struthanthus

Parasitic vine in 11142. Flowers yellow green, odorless.

MO, .

11144 Jacaranda

Cult. tree 8 m. tall. Nearly leafless, with old fruits and flowers. Corolla blue with white in ~~the~~ floor of throat.

MO, .

11145 Struthanthus Plithinusa stelis (L.) Kuijt

Viny parasitic shrub in 11144. Buds greenish white. det. J. Kuijt, 1993

MO, .

11146 Myrt. Eugenia sysygioides C.F. det. R. Lieman, 1975

Cult. tree with fluted gray trunks 20 cm. diam. Filaments and petals white, young fruit green.

MO, .

11147 Struthanthus

Parasitic vine in canopy of 11146. Flowers yellow green.

MO, 4.

11148 Peltophorum inerme (Roxb.) Naves det. C. Crowder, 1983

Cult. tree 60 cm. diam., branching from 1½ m. Petals bright yellow.

MO, 5.

11149 Struthanthus

Viny parasite in # 11148. Buds greenish white

April 9, 1974

Canal Zone, Panamá

ca. 17 PPV 572/916

11150-11151 Diablo Heights. alt. 10 m.

MO, .

11150 *Spathodea campanulata* P. Beauv.

Large cult. tree, nearly leafless, with old empty brown boat shaped fruits. det. A. Gentry, 1974

MO,

11151 *Phoradendron quadrangulare* (HBK.) Griseb.

Common bushy parasitic shrub in # 11150. Sepals and young fruit yellow green. det. J. Kuijt, 1976

April 11, 1974

Canal Zone, Panamá

17 PPA 408/083

MO, 26.

11152 *Tabeuia guayacan* (Beem.) Hemsl.

Tree 15 m. tall. Tropical moist forest along road to airport, 1½ km. W of Gamboa. alt. 40 m. Very few fruits seen. Fruit green, with strange pinewy surface, 50 cm. long, 2.5 cm. diam. Same tree coll. in flower March 10, 1974 sub # 10447 det. A. Gentry, 1974

29 300

300



